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CASE NUMBER: 18-2-11859-0 SEA

IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON
IN AND FOR KING COUNTY

KING COUNTY,

Plaintiff,

Case No. _____

v.

COMPLAINT

BP P.L.C., a public limited company of
England and Wales, CHEVRON
CORPORATION, a Delaware corporation,
CONOCOPHILLIPS, a Delaware corporation,
EXXON MOBIL CORPORATION, a New
Jersey corporation, ROYAL DUTCH SHELL
PLC, a public limited company of England and
Wales, and DOES 1 through 10,

Defendants.

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I. INTRODUCTION

1. Global warming is here and it is harming King County now as King County is already experiencing the impacts of a changing climate: warming temperatures, acidifying marine waters, rising seas, increasing flooding risk, decreasing mountain snowpack, and less water in the summer. Climate change will have long-term consequences for the economy, the environment, and public health and safety in King County. The rapidly rising sea level along the Pacific coast poses an imminent threat of storm surge flooding putting areas of King County at risk of inundation. This threat to human safety and to public and private property is becoming more urgent every day as global warming reaches ever more dangerous levels. King County must take abatement action to protect public and private property from this threat.

2. This egregious state of affairs is no accident. Rather, it is an unlawful public nuisance of the first order. Defendants are the five largest investor-owned fossil fuel corporations in the world as measured by their historic production of fossil fuels. The use of fossil fuels—oil, natural gas, and coal—is the primary source of the greenhouse gas pollution that causes global warming, a point that scientists settled years ago.¹ Defendants have produced massive amounts of fossil fuels for many years. Recent disclosures of internal industry documents demonstrate that they have done so despite knowing—since at least the 1980s—that massive fossil fuel usage would cause dangerous global warming. It was at that time that scientists on their staffs or with whom they consulted through their trade association, the American Petroleum Institute (“API”), investigated the science and warned in stark terms that fossil fuel usage would cause global warming at a rate unprecedented in the history of human civilization and present risks of “catastrophic” harm in coming decades.

3. Defendants took these stark warnings and proceeded to double-down on fossil fuels. Most of the carbon dioxide now in the atmosphere as a result of combustion of

¹ See, e.g., Carbon Dioxide and Climate: A Scientific Assessment, Report of an Ad Hoc Study Group on Carbon Dioxide and Climate to the Climate Research Board, Assembly of Mathematical and Physical Sciences, National Research Council (1979), at vii, 4-6, available at <https://www.nap.edu/catalog/12181/carbon-dioxide-and-climate-a-scientific-assessment>.

1 Defendants' fossil fuels is likely attributable to their recent production—*i.e.*, to fossil fuels
 2 produced by Defendants since 1980. Even today, with the global warming danger level at a
 3 critical phase, Defendants continue to engage in massive fossil fuel production and execute long-
 4 term business plans to continue and even expand their fossil fuel production for decades into the
 5 future.

6 4. The consequences of global warming from past fossil fuel usage is an irreversible
 7 condition on any relevant time scale: it will last hundreds or even thousands of years.
 8 Defendants' planned production of fossil fuels into the future will exacerbate global warming
 9 and require greater and more costly abatement actions to protect King County.

10 5. Defendants, notably, did not simply produce fossil fuels. They engaged in large-
 11 scale, sophisticated advertising and communications campaigns to promote pervasive fossil fuel
 12 usage and to portray fossil fuels as environmentally responsible and essential to human well-
 13 being—even as they knew that their fossil fuels would contribute, and subsequently were
 14 contributing, to dangerous global warming. These promotional efforts continue through today
 15 even in the face of overwhelming scientific evidence that fossil fuels are altering the climate and
 16 global warming has become an existential threat to modern life.

17 6. Defendants' promotion of fossil fuels has also entailed denying mainstream
 18 climate science or downplaying the risks of global warming. During the 1990s and early 2000s,
 19 Defendants stole a page from the Big Tobacco playbook and sponsored communications
 20 campaigns, either directly or through the API or other groups, to deny and discredit the
 21 mainstream scientific consensus on global warming, downplay the risks of global warming, and
 22 even to launch unfounded attacks on the integrity of leading climate scientists. "Uncertainty" of
 23 the science became the constantly repeated mantra of this Big Oil communications campaign just
 24 as "Doubt is our product" was the Big Tobacco communications theme. Emphasizing
 25 "uncertainty" in climate science, directly or through the API, is still a focus of Defendants'
 26 efforts to promote their products even though Defendants are well aware that the fundamental
 27 scientific facts of global warming are not in dispute and are a cause of grave danger.

7. The purpose of all this promotion of fossil fuels and efforts to undermine mainstream climate science was, like all marketing, to increase sales and protect market share. It succeeded.

8. Scientific analysis shows that the costs of dealing with global warming will be staggering for the public entities that must protect their people and their coastlines. As King County noted in its 2015 Strategic Climate Action Plan (“2015 SCAP”), “Even if global and GHG [greenhouse gas] emissions decrease dramatically, many climate change impacts are now inevitable and preparation for those changes is essential.” King County has a long standing commitment to preparing for the impacts of climate change. Climate change is causing King County to prepare for impacts on wastewater treatment and conveyance facilities, roads and bridges, the King County International Airport, storm water management, flood risk, public health, emergency management, and salmon recovery.² The magnitude of the actions needed to abate harms from climate change, and the amount of property at risk, will only increase.

9. Defendants are substantial contributors to the public nuisance of global warming that is causing injury to Plaintiff and thus are jointly and severally liable. Defendants’ cumulative production of fossil fuels over many years places each of them among the top sources of global warming pollution in the world. And each Defendant is committed to massive fossil fuel production well into the future. These contributions to atmospheric greenhouse gas loading from Defendants’ products contributes measurably to global warming.

10. Plaintiff seeks compensatory damages and an order requiring Defendants to abate the global warming-induced nuisance to which they have contributed by funding an abatement program to build infrastructure and finance programs that are urgently needed to protect human safety and public and private property in King County. Plaintiff does not seek to impose liability on Defendants for their direct emissions of greenhouse gases and does not seek to restrain Defendants from engaging in their business operations. Nor does Plaintiff seek to impose any

² 2015 SCAP at 98, available at http://your.kingcounty.gov/dnrp/climate/documents/2015_King_County_SCAP-Full_Plan.pdf.

liability for lobbying activity; to the extent any particular promotional activity might have had dual goals of both promoting a commercial product in the marketplace and influencing policy, Plaintiff invokes such activities for the purpose of the former, not the latter, and/or as evidence relevant to show Defendants' knowledge of the dangerous nature of their products. This case is, fundamentally, about shifting the costs of abatement back onto the companies. After all, it is Defendants who have profited and will continue to profit by knowingly contributing to global warming, thereby doing all they can to help create and maintain a profound public nuisance.

II. PARTIES

A. Plaintiff

11. Plaintiff King County ("King County" or "County") is a Washington county organized and existing under and by virtue of the laws of the State of Washington, RCW 36.01, *et seq.* King County owns and manages property and structures that are currently impacted and threatened by global warming.

B. Defendants

12. Defendant BP p.l.c. ("BP") is a public limited company registered in England and Wales with its headquarters in London, England, doing business in Washington. BP was created in 1998 as a result of a merger between the Amoco Corporation ("Amoco"), a former U.S. corporation, and the British Petroleum Company p.l.c. BP is a publicly traded, multinational, vertically integrated oil and gas company that explores for, produces, refines, markets, and sells oil, natural gas, and fossil fuel products.

13. BP controls company-wide climate change policies and fossil fuel production.³ BP, through its employees and/or agents, manages, directs, conducts, and/or controls operations relating to its subsidiaries' participation in the process by which fossil fuels, including raw crude oil, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers. BP also exercises control over company-wide decisions on production and use of fossil fuel

³ BP Responses to Climate Change 2016 Information Request from Carbon Disclosure Project at 1, available at <https://www.bp.com/content/dam/bp/en/corporate/pdf/sustainability-report/group-reports/bp-cdp-submission-2016.pdf>.

1 reserves considering climate change impacts. BP's management, direction, conduct, and/or
 2 control is exercised through a variety of means, including through its employees' and/or agents'
 3 implementation of policies, procedures, and programs relating to climate change generally and to
 4 production of fossil fuels specifically. BP states in its annual report for 2017 that the BP "group
 5 explores for oil and natural gas under a wide range of licensing, joint arrangement and other
 6 contractual agreements," and that "[a]ll subsidiary undertakings are controlled by the group."⁴

7 14. As a result of its management, direction, conduct, and/or control of operations
 8 relating to company-wide climate change policies and fossil fuel production, Defendant BP is
 9 responsible for its subsidiaries' past and current production and promotion of fossil fuel
 10 products.

11 15. Defendant Chevron Corporation ("Chevron") is a Delaware Corporation with its
 12 principal place of business located in San Ramon, California, doing business in Washington.
 13 Chevron is a publicly traded, multinational, vertically integrated oil and gas company that
 14 explores for, produces, refines, markets, and sells oil, natural gas, and fossil fuel products.

15 16. Chevron controls company-wide climate change policies and fossil fuel
 16 production.⁵ Chevron, through its employees and/or agents, manages, directs, conducts, and/or
 17 controls operations relating to its subsidiaries' participation in the process by which fossil fuels,
 18 including raw crude oil, are produced, transported, refined, stored, distributed, marketed, and/or
 19 sold to consumers. Chevron also exercises control over company-wide decisions on production
 20 and use of fossil fuel reserves considering climate change impacts. Chevron's management,
 21 direction, conduct, and/or control is exercised through a variety of means, including through its
 22 employees' and/or agents' implementation of policies, procedures, and programs relating to
 23 climate change generally and to production of fossil fuels specifically.

24 _____
 25 ⁴ BP Annual Report and Form 20-F 2017 at 29, 231, available at
<https://www.bp.com/content/dam/bp/en/corporate/pdf/investors/bp-annual-report-and-form-20f-2017.pdf>.

26 ⁵ Chevron Responses to Climate Change 2016 Information Request from Carbon Disclosure
 27 Project at 2, available at [https://www.chevron.com/-/media/chevron/corporate-responsibility/](https://www.chevron.com/-/media/chevron/corporate-responsibility/documents/CDP-2016.pdf)
 28 documents/CDP-2016.pdf.

1 17. As a result of its management, direction, conduct, and/or control of operations
2 relating to company-wide climate change policies and fossil fuel production, Defendant Chevron
3 is responsible for its subsidiaries' past and current production and promotion of fossil fuel
4 products.

5 18. Defendant ConocoPhillips is a Delaware Corporation with its principal place of
6 business located in Houston, Texas, doing business in Washington. ConocoPhillips is a publicly
7 traded, multinational oil and gas company that produces, markets, and sells oil and natural gas
8 and for many years was a multinational, vertically integrated oil and gas company that also
9 refined and sold finished oil products.

10 19. ConocoPhillips controls company-wide climate change policies and fossil fuel
11 production.⁶ ConocoPhillips, through its employees and/or agents, manages, directs, conducts,
12 and/or controls operations relating to its subsidiaries' participation in the process by which fossil
13 fuels, including raw crude oil, are produced, transported, refined, stored, distributed, marketed,
14 and/or sold to consumers. ConocoPhillips also exercises control over company-wide decisions
15 on production and use of fossil fuel reserves considering climate change impacts.
16 ConocoPhillips's management, direction, conduct, and/or control is exercised through a variety
17 of means, including through its employees' and/or agents' implementation of policies,
18 procedures, and programs relating to climate change generally and to production of fossil fuels
19 specifically.

20 20. As a result of its management, direction, conduct, and/or control of operations
21 relating to company-wide climate change policies and fossil fuel production, Defendant
22 ConocoPhillips is responsible for its subsidiaries' past and current production and promotion of
23 fossil fuel products.

24 21. Defendant Exxon Mobil Corporation ("Exxon") is a New Jersey corporation with
25 its principal place of business located in Irving, Texas, doing business in the State of
26

27 ⁶ ConocoPhillips Responses to Climate Change 2016 Information Request from Carbon
28 Disclosure Project at 2, available at <https://www.cdp.net/en/companies>.

1 Washington. Exxon is a publicly traded, multinational, vertically integrated oil and gas company
 2 that explores for, produces, refines, markets, and sells oil, natural gas, and fossil fuel products
 3 and, as recently as 2009, produced, marketed, and sold coal.

4 22. Exxon controls company-wide climate change policies and fossil fuel production.⁷
 5 Exxon, through its employees and/or agents, manages, directs, conducts, and/or controls
 6 operations relating to its subsidiaries' participation in the process by which fossil fuels, including
 7 raw crude oil, are produced, transported, refined, stored, distributed, marketed, and/or sold to
 8 consumers. Exxon also exercises control over company-wide decisions on production and use of
 9 fossil fuel reserves considering climate change impacts. Exxon's management, direction,
 10 conduct, and/or control is exercised through a variety of means, including through its employees'
 11 and/or agents' implementation of policies, procedures, and programs relating to climate change
 12 generally and to production of fossil fuels specifically.

13 23. As a result of its management, direction, conduct, and/or control of operations
 14 relating to company-wide climate change policies and fossil fuel production, Defendant Exxon is
 15 responsible for its subsidiaries' past and current production and promotion of fossil fuel
 16 products.

17 24. Defendant Royal Dutch Shell plc ("Shell") is a public limited company registered
 18 in England and Wales with its headquarters in The Hague, Netherlands, doing business in
 19 Washington. Shell is a publicly traded, multinational, vertically integrated oil and gas company
 20 that explores for, produces, refines, markets, and sells oil, natural gas and fossil fuel products.

21 25. Shell controls company-wide climate change policies and fossil fuel production.⁸
 22 Shell, through its employees and/or agents, manages, directs, conducts, and/or controls
 23 operations relating to its subsidiaries' participation in the process by which fossil fuels, including
 24

25 ⁷ Exxon Responses to Climate Change 2016 Information Request from Carbon Disclosure
 26 Project at 1, available at <http://cdn.exxonmobil.com/~media/global/files/energy-and-environment/2016-cdp-response.pdf>.

27 ⁸ Shell Responses to Climate Change 2016 Information Request from Carbon Disclosure
 28 Project at 2, available at <https://www.cdp.net/en/companies>.

raw crude oil, are produced, transported, refined, stored, distributed, marketed, and/or sold to consumers. Shell also exercises control over company-wide decisions on production and use of fossil fuel reserves considering climate change impacts. Shell's management, direction, conduct, and/or control is exercised through a variety of means, including through its employees' and/or agents' implementation of policies, procedures, and programs relating to climate change generally and to production of fossil fuels specifically.

26. As a result of its management, direction, conduct, and/or control of operations relating to company-wide climate change policies and fossil fuel production, Defendant Shell is responsible for its subsidiaries' past and current production and promotion of fossil fuel products.

27. Defendants DOES ONE through TEN are sued herein under fictitious names. Plaintiff does not at this time know the true names or capacities of said defendants, but prays that the same may be alleged when ascertained.

C. Defendants' connections to Washington

28. Defendants have contributed to the creation of a public nuisance causing severe harms and threatening catastrophic harm in King County. All of the Defendants' long-standing and extensive contacts with Washington, described below, have furthered and supported their production, marketing, and sale of massive quantities of fossil fuels and fossil fuel products, which has injured, and continues to injure, King County.

29. Each Defendant, directly and through its subsidiaries and agents, substantially participates in the process by which raw crude oil is extracted from the ground, refined into fossil fuel products, including finished gasoline products, and delivered, marketed, and sold to Washington residents for use. For example, and as described in more detail below, Defendants intentionally created a fungible and commingled gasoline product in order to be able to utilize a common distribution system that moves gasoline from refineries through pipelines to terminals (large storage tanks). Pipelines and trucks then transport gasoline from terminals to underground storage tanks at retail stations where it is sold to consumers. A petroleum products terminal facility consists of one or more very large aboveground storage tanks for fossil fuel products,

including gasoline, and is part of the distribution chain to supply fossil fuel products, including gasoline, from a refinery to end consumers, including consumers in Washington. Defendants created this distribution system because it was more efficient and cost effective for them to distribute gasoline from refineries to retail gasoline stations. As described below, Defendants substantially participated in this gasoline distribution process by producing raw crude oil, supplying raw crude oil to refineries, refining raw crude oil into finished gasoline at refineries, supplying gasoline into pipelines, removing gasoline from pipelines at certain storage facilities or placing gasoline into trucks for transport to retail sites, and/or storing gasoline in underground storage tanks at retail gasoline stations.

30. The value of each Defendant's company is principally determined by its fossil fuel reserves. Reserves are the lifeblood of the company—without them, an oil company's value declines precipitously. There is no way that decisions on companywide levels of fossil fuel production, which are inherently intertwined with decisions on the levels of reserves, could be made by Defendants' subsidiaries.

31. The BP parent company is the ultimate decision maker on the most fundamental business decision about the company's core business, *i.e.*, the level of companywide fossil fuels to produce, including taking into account climate change risks. This decision includes multi-decade future business planning regarding production levels. BP states in its most recent annual report that it brought "seven major projects in the Upstream [segment, *i.e.*, exploration and production] . . . online and under budget for the portfolio as a whole," and these projects, "along with six we brought online in 2016, have contributed to a 12% increase in our production."⁹ It continued: "That helps to put us on track to deliver 900,000 barrels of new product per day by 2021."¹⁰ "We also strengthened our portfolio with our most successful year of exploration since

⁹ BP Annual Report and Form 20-F 2017, *supra* note 4, at 9.

¹⁰ *Id.*

2004, sanctioned three exciting new projects in Trinidad, India and the Gulf of Mexico and added 143% reserves replacement for the group.”¹¹

32. Notably, the BP parent—not a subsidiary—submits annual responses to climate change questionnaires from a non-profit organization called CDP (formerly the Carbon Disclosure Project), which runs the global disclosure system for investors, companies, and others to assist them in managing their environmental impacts.¹² In its 2016 response, BP publicly stated that its “Board or individual/sub-set of the Board or other committee appointed by the Board” is the highest level within the company with direct responsibility for climate change.¹³ Climate change is, of course, a major risk to BP’s business because fossil fuels emit carbon dioxide and thus any significant climate change action may have an impact on BP’s business. BP thus explains:

As part of BP’s annual planning process, we review the principal risks and uncertainties to the group. We identify those as having a high priority for particular oversight by the board and its various committees in the coming year. BP manages, monitors and reports on the principal risks and uncertainties that can impact our ability to deliver our strategy of meeting the world’s energy needs responsibly while creating long-term shareholder value. Climate change and carbon pricing are explicitly assessed as risk factors. Our management systems, organizational structures, processes, standards, code of conduct and behaviours together form a system of internal control that governs how we conduct the business of BP and manage associated risks.¹⁴

33. BP further states: “Strategic climate-related policy and other relevant non-operational risk is assessed at a group level.”¹⁵ BP in its CDP response also takes responsibility for companywide production of fossil fuels by calculating the greenhouse gas emissions resulting

¹¹ *Id.*

¹² BP Responses to Climate Change 2016 Information Request from Carbon Disclosure Project, *supra* note 3.

¹³ *Id.* at 1. BP’s response to the Carbon Disclosure questionnaire was on behalf of all of its segments, including upstream operations. *Id.* at 26.

¹⁴ *Id.* at 2.

¹⁵ *Id.* at 3.

1 from the use of its products by consumers based on “BP’s total reported production of natural
2 gas, natural gas liquids and refinery throughputs.”¹⁶

3 34. BP’s chief executive is responsible for maintaining “BP’s system of internal
4 control” that is “employed to conduct the business of BP,” and BP’s CDP response states:
5 “Climate change risks are reviewed through two executive committees - chaired by the group
6 chief executive, and one working group chaired by the executive vice president and group chief
7 of staff, as part of BP’s established management structure.”¹⁷ BP describes its “risk management
8 procedures with regard to climate change risks and opportunities,” as being “[i]ntegrated into
9 multi-disciplinary companywide risk management processes.”¹⁸

10 35. BP as the parent company also takes responsibility for the global corporate family
11 on the issue of “stranded assets,” i.e. the possibility that fossil fuel reserves may become stranded
12 assets if, prior to the end of their economic life, they no longer can earn an economic return
13 because of climate change: “BP is well aware of the so-called stranded assets debate and is
14 considering it carefully.”¹⁹

15 36. BP does business in Washington, including through its subsidiaries and agents.
16 BP subsidiaries—including BP America Inc., BP America Production Company, BP Amoco
17 Chemical Company, BP Corporation of North America, Inc., BP Oil Pipeline Company, BP
18 Pipelines (North America) Inc., BP Products North America Inc., IGI Resources, Inc., and
19 Atlantic Richfield Company—are registered to do business in Washington and have an agent for
20 service of process in Washington.

21 37. BP, through its subsidiary and agent BP West Coast Products LLC, operates the
22 Cherry Point Refinery in Blaine, Washington, with a processing capacity of up to 236,000
23
24

25 ¹⁶ *Id.* at 40.

26 ¹⁷ *Id.* at 2.

27 ¹⁸ *Id.*

28 ¹⁹ *Id.* at 3.

1 barrels of crude oil per day. It is the third largest on the West Coast.²⁰ Cherry Point provides a
 2 majority of the jet fuel used at international airports in Seattle, Portland, and Vancouver, British
 3 Columbia.²¹ When it first opened in 1971, its primary purpose was to refine crude oil brought by
 4 tanker ships from the North Slope of Alaska; today it accepts and refines crude oil from around
 5 the world.²² Over the past decade, BP reports that it has made more than \$1.5 billion worth of
 6 capital improvements at the refinery.²³ BP reports that as of 2016, it spent \$275 million with
 7 Washington vendors and provides jobs to more than 1,500 people.²⁴ It also states that it is
 8 “proud to provide a tax base that supports local school and fire districts” and has been “a good
 9 neighbor . . . for more than 45 years.”²⁵

10 38. BP’s website describes Cherry Point as one of its “premier U.S. assets following
 11 the merger with ARCO in 2000.”²⁶

12 39. BP also operates in Alaska, where the company began working in 1959.²⁷ BP’s
 13 Cherry Point refinery, which BP describes as its “refining workhorse,” was built to process
 14 Alaskan crude oil.²⁸ BP started drilling at the massive Prudhoe Bay oil field in 1968, which has
 15 generated more than 12.5 billion barrels of oil since 1977.²⁹

18 ²⁰ Energy Transitions Laboratory, Western Washington University, A Refining History of
 19 Washington State at 6 (Aug. 2015), http://www.energytrans.org/uploads/4/7/9/7/47971323/2015-08-20_jones_refincrics.pdf (“Refining History”).

20 ²¹ Washington BP’s economic investment, https://www.bp.com/content/dam/bp-country/en_us/PDF/2017EIR/BP%20in%20Washington.pdf.

21 ²² *Id.*

22 ²³ *Id.*

23 ²⁴ *Id.*

24 ²⁵ *Id.*

25 ²⁶ BP, *Washington*, https://www.bp.com/en_us/bp-us/where-we-operate/bp-washington.html
 26 (last visited May 8, 2018).

27 ²⁷ BP, *BP in Alaska*, https://www.bp.com/content/dam/bp-country/en_us/PDF/2016EIR/BP_in_AK_2016.pdf at 2.

28 ²⁸ BP, *Washington*, *supra* note 26.

29 ²⁹ BP, *BP in Alaska*, *supra* note 27, at 2.

40. BP, through its subsidiary and agent BP West Coast Products LLC, operated the Ferndale Refinery from 1988 to 1993, when its wholly owned subsidiary, Sohio, acquired the refinery from Mobil Oil.³⁰ The Ferndale Refinery has a capacity of 101,000 barrels of oil a day.³¹

41. BP, through its subsidiary and agent BP Pipelines (North America), owns and operates the Olympic Pipeline, a 400-mile interstate pipeline system that includes 12-inch, 14-inch, 16-inch, and 20-inch pipelines.³² The pipeline runs along a 299-mile corridor from Blaine, Washington to Portland, Oregon and transports gasoline, diesel, and jet fuel.³³ The fuel transported by the Olympic Pipelines originates at four Puget Sound refineries, and is delivered to Seattle's Harbor Island, Seattle-Tacoma International Airport, Renton, Tacoma, Vancouver (Washington), and Portland (Oregon).³⁴

42. In a June 3, 2013 press release posted on BP Global's website, Jeff Pitzer, BP's Northwest Fuels Value Chain President stated: "[W]e remain committed to supplying our customers in . . . the Pacific Northwest with the quality fuels they depend on."³⁵

43. BP, through its subsidiary and agent BP West Coast Products LLC owns terminals in Blaine (T-91-WA-4418) and Seattle (T-91-WA04425).³⁶

44. There are three BP Energy offices that market natural gas throughout Washington state.³⁷

³⁰ Wikipedia, *Ferndale Refinery*, https://en.wikipedia.org/wiki/Ferndale_Refinery (last updated Oct. 23, 2017).

³¹ Refining History, *supra* note 20, at 4.

³² https://www.bp.com/en_us/bp-us/what-we-do/bp-pipelines.html.

³³ *Id.*

³⁴ *Id.*

³⁵ <https://www.bp.com/en/global/corporate/media/press-releases/bp-completes-sale-of-carson-refinery-and-southwest-u-s--retail-a.html>.

³⁶ BP, *Washington*, *supra* note 26.

³⁷ *Id.*

45. IGI Resources, Inc., a subsidiary of BP plc since 2000, markets natural gas in the northwest region.³⁸ Through IGI Resources, BP purchases biomethane produced at the King County South Wastewater Treatment Plant and at the Cedar Hills Landfill gas scrubbing operation, which is owned and operated by a third-party on landfill land leased from King County. Through IGI Resources, BP receives credits (called “Renewable Identification Numbers”, or RINs) to meet an EPA-specified Renewable Volume Obligation. The RINs are either held to meet BP’s internal obligations or sold on the market: through IGI Resources, BP sells South Plant gas to fuel local natural gas vehicles, and it sells the Cedar Hills gas to the California natural gas vehicle market. In 2017, the South Wastewater Treatment Plant produced 2,424,890 therms of renewable natural gas—which is equivalent to (fossil) natural gas, but much lower carbon impact, which was sold to generate over \$6.2 million of revenue. And the Cedar Hills operation produced 15,176,700 therms in 2017, generating approximately \$7 million in revenue to King County.

46. BP defines itself as “a retail marketing leader with around 7,100 BP- and Arco-branded sites in the U.S.” Arco-branded gas stations are ubiquitous throughout western and central Washington.³⁹ Its roughly 1,000 am/pm[®] convenience stores serve 24 million customers a month in five western states, including Washington.⁴⁰

47. BP exercises control over gasoline product quality and specifications at these ARCO-branded retail stations. BP previously owned and/or operated BP-branded gasoline stations in Washington. BP-branded retail stations can only sell gasoline that contains BP’s proprietary additives—the additives that distinguish otherwise fungible gasoline as gasoline that can be sold at BP-branded retail stations. Upon information and belief, BP has entered into contracts with operators of BP-branded retail stations in Washington, and distributors, which, among other things, have required these operators to sell only gasoline with BP proprietary

³⁸ <https://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=681935>

³⁹ <https://www.arco.com/find-a-station/washington/>.

⁴⁰ https://www.bp.com/en_us/bp-us/what-we-do/retail.html.

additives, and for supply of certain volumes of such gasoline to BP-branded stations. BP offers credit cards to consumers on its interactive website to promote sales of gasoline and other products at its branded gasoline stations, including BP-branded retail stations in the United States, and upon information and belief, formerly did so for BP-branded retail stations in Washington. BP promotes gasoline sales by offering consumers, through its interactive website, “cent-per-gallon rewards” for using BP credit cards that effectively discount gasoline sold at BP stations, including BP-branded retail stations in the United States, and upon information and belief, formerly did so for BP-branded retail stations in Washington.

48. The Chevron parent company is the ultimate decision maker on the most fundamental business decision about the company’s core business, *i.e.*, the level of companywide fossil fuels to produce, including taking into account climate change risks. This decision includes multi-decade future business planning regarding production levels.

49. Notably, the Chevron parent—not a subsidiary—submits annual responses to climate change questionnaires from CDP.⁴¹ In its 2016 response, Chevron stated that the highest level of direct responsibility for climate change within its company is the “Board or individual/sub-set of the Board or other committee appointed by the Board.”⁴² Chevron reports that its risk management procedures with regard to climate change risks and opportunities are “[i]ntegrated into multi-disciplinary company wide risk management processes.”⁴³ Chevron states: “Climate risks and issues are expressly discussed and addressed monthly at a standing executive level committee [of the Board], and at least twice annually – more often as warranted – with the Corporate Strategy and Planning Committee.”⁴⁴ The Board considers “[a]ll geographic areas, domestic (USA) and foreign in which Chevron’s operation and performance are affected

⁴¹ Chevron Responses to Climate Change 2016 Information Request from Carbon Disclosure Project, *supra* note 5.

⁴² *Id.* at 2.

⁴³ *Id.*

⁴⁴ *Id.* at 3.

1 or could be affected.”⁴⁵ Chevron’s response further states: “We assess the GHG emissions of our
 2 capital projects. When developing and approving major capital projects, we estimate a project’s
 3 incremental emissions profile, assess the final financial impact of GHG regulations, and describe
 4 the emissions reduction options considered and implemented.”⁴⁶

5 50. Chevron does business in Washington, including through its subsidiaries and
 6 agents. Chevron subsidiaries—including Chevron Pipe Line Company, Chevron Oronite
 7 Company LLC, Chevron Phillips Chemical Company LP, Chevron Natural Gas Services, Inc.,
 8 and Texaco Group LLC—are registered to do business in Washington and have an agent for
 9 service of process in Washington.

10 51. Chevron, through its subsidiary and agent Chevron Pipe Line Company, operates
 11 pipeline assets that transport crude oil, refined petroleum products, liquefied petroleum gas,
 12 natural gas and chemicals within the United States. On a daily basis, Chevron Pipe Line’s
 13 network of approximately 4,100 miles of pipe transports over 1.3 million barrels of crude,
 14 refined products and chemicals.⁴⁷

15 52. Eastern Washington markets receive petroleum product via the Chevron pipeline
 16 from Utah.⁴⁸

17 53. Before it merged with Chevron, Texaco co-owned the Anacortes Refinery with
 18 Shell; the refinery has a capacity of over 145,000 barrels a day.⁴⁹ Texaco divested its share in
 19 early 2000, and Shell became the sole owner of the facility.

20 54. Chevron, through its subsidiaries and agents, also produces oil in Alaska, and
 21 upon information and belief, some of this crude oil is supplied to Washington.
 22

23 ⁴⁵ *Id.* at 2-3.

24 ⁴⁶ *Id.* at 3.

25 ⁴⁷ <http://www.chevronpipeline.com/about/>

26 ⁴⁸ Refining History, *supra* note 20, at 20; see also http://agportal-s3bucket.s3.amazonaws.com/uploadedfiles/Another/Safeguarding_Consumers/Antitrust/Unfair_Trade_Practices/Gas_Prices/2018/2018_MARCH_Illustration-002.pdf

27 ⁴⁹ Refining History, *supra* note 20, at 7, 27.
 28

55. The ConocoPhillips parent company is the ultimate decision maker on the most fundamental business decision about the company's core business, *i.e.*, the level of companywide fossil fuels to produce, including taking into account climate change risks. This decision includes multi-decade future business planning regarding production levels. ConocoPhillips's most recent annual report repeatedly demonstrates that as the parent, ConocoPhillips decides companywide the level of fossil fuels to produce, including taking into account climate change risks: "ConocoPhillips is the world's largest independent exploration and production (E&P) company, based on proved reserves and production of liquids and natural gas."⁵⁰ "We explore for, produce, transport and market crude oil, bitumen, natural gas LNG and natural gas liquids on a worldwide basis."⁵¹ The level of oil and gas reserves principally determines the value of the entire company: "Unless we successfully add to our existing proved reserves, our future crude oil, bitumen, natural gas and natural gas liquids production will decline, resulting in an adverse impact to our business."⁵² "[F]uture environmental laws and regulations, such as limitations on greenhouse gas emissions, may impact or limit our current business plans and reduce demand for our products."⁵³

56. ConocoPhillips, not its subsidiaries, optimizes its oil and gas portfolio to fit its strategic plan. For example, it reports that "[i]n November 2016, we announced our plan to generate \$5 billion to \$8 billion of proceeds over two years by optimizing our portfolio to focus on value-preserving, low cost-of-supply projects that strategically fit our development plans."⁵⁴ ConocoPhillips further states that it "accomplished several strategic milestones in 2017, including progressing our efforts to optimize our portfolio."⁵⁵ Only the parent company can

⁵⁰ ConocoPhillips, 2017 Form 10-K at 1 (Feb. 20, 2018), available at <https://www.sec.gov/Archives/edgar/data/1163165/000119312518049729/d534096d10k.htm>.

⁵¹ *Id.* at 2.

⁵² *Id.* at 21.

⁵³ *Id.* at 22.

⁵⁴ *Id.* at 1.

⁵⁵ *Id.* at 31.

1 “optimize” a companywide “portfolio,” and managing its overall portfolio undeniably takes into
 2 account “limitations on greenhouse gas emissions” as well as the company’s climate change
 3 position.

4 57. Notably, the ConocoPhillips parent—not a subsidiary—submits annual responses
 5 to climate change questionnaires from CDP.⁵⁶ ConocoPhillips’s 2016 response to the CDP
 6 acknowledges that its “Board or individual/sub-set of the Board or other committee appointed by
 7 the Board” has the highest level of direct responsibility for climate change within the company,⁵⁷
 8 that ConocoPhillips develops a corporate Climate Change Action Plan which “identifies
 9 company-wide risks and opportunities and adopts a consistent approach to manage the risk
 10 across the company,”⁵⁸ and that it “routinely test[s] [its] investment decisions and business
 11 strategies against a low carbon scenario in [its] strategic scenario planning process.”⁵⁹
 12 ConocoPhillips factors the “cost of carbon into [its] long range planning exercise, and [its] long
 13 range planning process considers the long-term changes to supply and demand of [its] primary
 14 products, oil and gas.”⁶⁰ And its climate change strategy “cause[s] major business decisions to
 15 be made with consideration of the risks and impacts of climate change.”⁶¹ ConocoPhillips in its
 16 CDP response also takes responsibility for companywide production of fossil fuels by calculating
 17 the greenhouse gas emissions resulting from the use of its products by consumers based on
 18 “equity production rates publicly reported in company financial statements” and other data.⁶²

19 58. ConocoPhillips does business in Washington, including through its subsidiaries
 20 and agents. ConocoPhillips subsidiaries—including ConocoPhillips Company, ConocoPhillips
 21

22 ⁵⁶ ConocoPhillips Responses to Climate Change 2016 Information Request from Carbon
 23 Disclosure Project, *supra* note 6.

24 ⁵⁷ *Id.* at 2.

25 ⁵⁸ *Id.* at 3.

26 ⁵⁹ *Id.*

27 ⁶⁰ *Id.* at 28.

28 ⁶¹ *Id.*

⁶² *Id.* at 39.

Alaska, Inc., and ConocoPhillips Communications, Inc.—are registered to do business in Washington and have an agent for service of process in Washington.

59. ConocoPhillips operated the Ferndale Refinery, with a capacity of 101,000 barrels of oil a day, until 2012,⁶³ when it spun off its downstream assets as a new independent energy company, Phillips 66, which still operates the Ferndale Refinery.⁶⁴

60. ConocoPhillips is Alaska’s largest oil producer and ships Alaskan crude oil to Washington.⁶⁵ “ConocoPhillips owns and operates Polar Tankers, one of the largest oil tanker fleets under U.S. flag. The fleet transports Alaska North Slope crude oil primarily to refineries in Puget Sound, San Francisco, Long Beach and Hawaii.”⁶⁶ ConocoPhillips’s fleet consists of five tankers “designed specifically for the twice-monthly 2,500 to 5,000-mile round trip from Valdez, Alaska, to Washington, California and Hawaii.”⁶⁷

61. The Exxon parent company is the ultimate decision maker on the most fundamental business decision about the company’s core business, *i.e.*, the level of companywide fossil fuels to produce, including taking into account climate change risks. This decision includes multi-decade future business planning regarding production levels. For example, its 2018 Energy and Carbon Summary Report acknowledges that “the main driver of intrinsic value of an integrated oil company’s upstream operations is its proved reserves” and its “proved reserves totaled about 20 billion oil-equivalent barrels” at the end of 2016, evidencing that production decisions are critical decisions made by the parent not the subsidiaries.⁶⁸ As Exxon states in its most recent 10-K, “ExxonMobil’s success, including our ability to mitigate risk and

⁶³ Refining History, *supra* note 20, at 4.

⁶⁴ *Id.* at 30.

⁶⁵ <http://alaska.conocophillips.com/what-we-do/oil-production/Pages/default.aspx>.

⁶⁶ ConocoPhillips, Alaska Operations 2016 Snapshot, available at https://static.conocophillips.com/files/resources/alaska-operations-snapshot-2016_final.pdf

⁶⁷ *Id.*

⁶⁸ <http://cdn.exxonmobil.com/~media/global/files/energy-and-environment/2018-energy-and-carbon-summary.pdf> at 10.

1 provide attractive returns to shareholders, depends on our ability to successfully manage our
2 overall portfolio, including diversification among types and locations of our projects.”⁶⁹

3 62. Notably, the Exxon parent—not a subsidiary—submits annual responses to
4 climate change questionnaires from CDP.⁷⁰ In 2016, Exxon reported that the “Board or
5 individual/sub-set of the Board or other committee appointed by the Board” is the highest level
6 of direct responsibility for climate change within its company, that “the Chairman of the Board
7 and Chief Executive Officer, the President and the other members of the Management
8 Committee are actively engaged in discussions relating to greenhouse gas emissions and the risks
9 of climate change on an ongoing basis,” and that Exxon “require[s] all of [its] business lines to
10 include, where appropriate, an estimate of greenhouse gas-related emissions costs in their
11 economics when seeking funding for capital investments.”⁷¹

12 63. ExxonMobil Corporation is registered to do business in Washington and has an
13 agent for service of process in Washington. Exxon does business in Washington, including
14 through its subsidiaries and agents. Exxon subsidiaries—including ExxonMobil Oil
15 Corporation, ExxonMobil Pipeline Company, and ExxonMobil Sales and Supply Company—are
16 also registered to do business in Washington and have an agent for service of process in
17 Washington.

18 64. Defendant Exxon is responsible for the pre-merger conduct of Mobil Corporation
19 with respect to all relevant issues herein, and the contacts of Mobil are attributable to Exxon.

20 65. Exxon predecessor and agent General Petroleum Corp. (a subsidiary of Socony
21 (Standard Oil Company of New York), which was integrated into Mobil Chemical Co. when the
22
23
24

25 ⁶⁹ Exxon, 2017 Form 10-K at 3–4 (Feb. 28, 2018), available at
<https://www.sec.gov/Archives/edgar/data/34088/000003408818000015/xom10k2017.htm>.

26 ⁷⁰ Exxon Responses to Climate Change 2016 Information Request from Carbon Disclosure
27 Project, *supra* note 7.

28 ⁷¹ *Id.* at 1-3.

1 company formed in 1960) built Ferndale Refinery in 1954 and continued to operate it until its
2 acquisition by BP in 1988.⁷² The refinery has a capacity of 101,000 barrels of oil a day.

3 66. ExxonMobil Corporation owns a petroleum products terminal (T-91-WA-4411) in
4 Spokane.⁷³ Exxon has owned and operated the terminal since 1954.

5 67. There are numerous Exxon-branded gasoline stations in Washington, including in
6 King County. Exxon exercises control over gasoline product quality and specifications at
7 Exxon-branded retail stations. Exxon-branded retail stations display the trademark of Exxon and
8 can only sell gasoline that contains Exxon's proprietary additives—the additives that distinguish
9 otherwise fungible gasoline as gasoline that can be sold at Exxon-branded retail stations. Exxon
10 offers credit cards to consumers, through its interactive website, to promote sales of gasoline and
11 other products at its branded gasoline stations, including Exxon-branded retail stations in
12 Washington. Exxon promotes gasoline sales by offering consumers discounts off every gallon
13 of gasoline at Exxon™ or Mobil™ stations, including Exxon-branded retail stations in
14 Washington.

15 68. Shell is involved in all facets of the petroleum production and distribution process
16 by design, as “part of an integrated value chain, including trading activities, that turns crude oil
17 and other feedstocks into a range of products which are moved and marketed around the world
18 for domestic, industrial and transport use.”⁷⁴

19 69. The Shell parent company is the ultimate decision maker on the most fundamental
20 business decision about the company's core business, *i.e.*, the level of companywide fossil fuels
21 to produce, including taking into account climate change risks. This decision includes multi-
22 decade future business planning regarding production levels. In its most recent annual report,
23

24
25 ⁷² Refining History, *supra* note 20, at 7, 22; Wikipedia, *supra* note 30..

26 ⁷³ IRS Approval Terminals (as of Apr. 30, 2018), https://www.irs.gov/pub/irs-utl/tcn_db.pdf.

27 ⁷⁴ Shell, Annual Report and Form 20-F 2017 at 46 (Mar. 14, 2018), available at
28 https://reports.shell.com/annual-report/2017/servicepages/downloads/files/shell_annual_report_2017.pdf.

1 Shell states: “Oil and gas remain central to our business for many years.”⁷⁵ The annual report
 2 makes clear that Shell’s overall production levels is a parent function: “Our delivery of new
 3 projects continues and we remain on track to deliver 1 million barrels of oil equivalent a day
 4 (boe/d) from new projects between 2014 and 2018. Overall, our production averaged 3.7 million
 5 boe/d in 2017, in line with 2016, with production from new fields offsetting the impact of field
 6 declines and divestments.”⁷⁶

7 70. Shell’s control over production decisions became unmistakably clear in a
 8 preliminary injunction hearing in 2015 in a case brought by two of Shell’s U.S. subsidiaries
 9 against Greenpeace in federal district court in Alaska. The Shell subsidiaries sought to restrain
 10 Greenpeace from protesting in close proximity to drilling ships exploring for oil off the coast of
 11 Alaska. Under cross examination, a subsidiary employee admitted that the decision to drill for oil
 12 was made by Royal Dutch Shell’s Board of Directors in The Hague:

13 A: It’s made at the board level, yes. . .

14 Q: The board of Royal Dutch Shell?

15 A: Yes.^[77]

16 This should not be surprising given that such decisions involve billions of dollars (\$7 billion in
 17 that case).⁷⁸

18 71. In addition, the level of oil and gas reserves principally determines the value of
 19 the entire company: “In the longer term, replacement of proved oil and gas reserves will affect
 20 our ability to maintain or increase production levels, which in turn will affect our earnings and
 21 cash flows.”⁷⁹ Shell’s annual report lists over a thousand separate subsidiaries; it would be
 22
 23

24 ⁷⁵ *Id.* at 06.

25 ⁷⁶ *Id.* at 07.

26 ⁷⁷ See Tr. of Hr’g on Mot. Prelim. Inj. at 175:17-177:25, *Shell Offshore, Inc. v. Greenpeace, Inc.*, No. 3:15-cv-054-SLG (D. Alaska Apr. 30, 2015) (ECF No. 90).

27 ⁷⁸ *Id.*

28 ⁷⁹ Shell Annual Report, *supra* note 74, at 55.

absurd to suggest that it is all of these subsidiaries—and not the Shell parent—that make individual decisions that determine the level of companywide fossil fuels to produce.⁸⁰

72. Notably, the Shell parent—not a subsidiary—submits annual responses to climate change questionnaires from CDP.⁸¹ In its 2016 response, Shell publicly stated that its “Board or individual/sub-set of the Board or other committee appointed by the Board” has the highest level of direct responsibility for climate change within the company.⁸² Climate change is, of course, a major risk to Shell’s business because fossil fuels emit carbon dioxide when used as intended and thus any significant climate change action may have an impact on Shell’s business. Shell states that “overall accountability for climate change within Shell lies with the Chief Executive Officer (CEO) and the Executive Committee (EC - CEO, CFO and main business and functional Directors).”⁸³ In addition, “Group CO2, a corporate team with global remit is responsible for evaluating climate change related risks to the Shell group, supports the business in developing CO2 management strategies and has oversight of the company’s CO2 management implementation programme.”⁸⁴ “Shell’s strategy is actively driven by Group CO2, a corporate function that monitors and examines the strategic implications of climate change to Shell’s business and the impact of developments in governmental policy and regulation with a direct line of accountability to the CEO and oversight of the company’s GHG management programme.”⁸⁵

73. Shell states in its response: “Shell has a global approach to climate change risk management, covering all regions worldwide where we operate or explore.”⁸⁶ Shell’s global approach to climate change applies to existing and new projects: “The risks and opportunities of climate change are assessed for new assets or projects in development by considering a project

⁸⁰ *Id.* at E2-E20.

⁸¹ Shell Responses to Climate Change 2016 Information Request from Carbon Disclosure Project, *supra* note 8.

⁸² *Id.* at 2.

⁸³ *Id.* at 2.

⁸⁴ *Id.* at 2.

⁸⁵ *Id.* at 3.

⁸⁶ *Id.* at 2.

1 screening value of GHG emissions at \$40/tonne in all investment decisions. New and existing
 2 assets are required to have a GHG & Energy Management Plan (details improvement options
 3 considering the GHG Project Screening Value, emissions and/or energy intensity target(s)).”⁸⁷

4 74. Shell as the parent company also takes companywide responsibility for the issue
 5 of “stranded assets,” *i.e.*, the possibility that fossil fuel reserves may become stranded assets if,
 6 prior to the end of their economic life, they no longer can earn an economic return because of
 7 climate change. Shell’s position on this issue is straightforward (as reported by Reuters): “Royal
 8 Dutch Shell has dismissed the possibility that its proven oil or gas reserves will become unusable
 9 as a result of climate change regulation, saying fossil fuels will play a key role in global energy
 10 to 2050 and beyond.”⁸⁸ In 2016, Royal Dutch Shell’s CEO, Ben van Beurden, reportedly stated
 11 that the “company is valued on produceable reserves that we can produce in the next 12 or 13
 12 years,” and “We should certainly be able to produce those under any climate outcome. Even if
 13 global temperatures can only rise by two degrees.”⁸⁹ With respect to climate change risks,
 14 Shell’s CEO states: “We know our long-term success as a company depends on our ability to
 15 anticipate the types of energy that people will need in the future in a way that is both
 16 commercially competitive and environmentally sound.”⁹⁰

17 75. Shell does business in Washington, including through its subsidiaries and agents.
 18 Shell subsidiaries—including Shell Oil Company, Shell Oil Company, LLC, and Shell Marine
 19
 20

21 ⁸⁷ *Id.* at 3.

22 ⁸⁸ Reuters, “Shell says fossil fuel reserves won’t be ‘stranded’ by climate regulation” (May
 23 19, 2014), <https://www.reuters.com/article/shell-climatechange/shell-says-fossil-fuel-reserves-wont-be-stranded-by-climate-regulation-idUSL6N0O54CB20140519>.

24 ⁸⁹ Oliver Gill, “Stranded reserves” due to climate change? Not likely, says Shell boss, CITY
 25 A.M., Nov. 26, 2016, <http://www.cityam.com/254454/stranded-reserves-due-climate-change-not-likely-says-shell>.

26 ⁹⁰ Shell, *A Better Life with a Health Planet: Pathways to Net-Zero Emissions* 3 (May 2016),
 27 http://www.shell.com/promos/new-report--a-better-life-with-a-healthy-planet/jcr_content.stream/1475857466913/a1aa5660d50ab79942f7e4a629fcb37ab93d021afb308b92c1b77696ce6b2ba6/scenarios-nze-brochure-interactive-afwv9-interactive.pdf.
 28

1 Products (US) Company—are registered to do business in Washington and have an agent for
2 service of process in Washington.

3 76. Shell, through its subsidiaries and agents, engages in oil refining and account for a
4 total capacity of 426,400 barrels per day.⁹¹ Shell Oil Products US operates Shell’s Puget Sound
5 Refinery, on March Point, located outside of Anacortes.⁹² The plant has a capacity of over
6 145,000 barrels a day.⁹³ Shell’s website states that it “has been a proud member of the Pacific
7 Northwest community for over 60 years.”⁹⁴

8 77. In 1955 Shell built the adjacent Anacortes Refinery, which has a capacity of
9 120,000 barrels per day.⁹⁵ Shell owned and operated the refinery until 1998.⁹⁶ Shell, through its
10 subsidiary and agent, Shell Oil Products US, owns a petroleum products terminal (T-91-WA-
11 4408) in Seattle.⁹⁷

12 78. There are numerous Shell-branded gasoline stations in Washington, including in
13 King County. Shell’s website lists hundreds of Shell gas stations in Washington State.⁹⁸ Shell
14 exercises control over gasoline product quality and specifications at Shell-branded retail stations.
15 Shell-branded retail stations display the trademark of Shell and can only sell gasoline that
16 contains Shell’s proprietary additives—the additives that distinguish otherwise fungible gasoline
17 as gasoline that can be sold at Shell-branded retail stations. Shell offers credit cards to
18 consumers on its interactive website to promote sales of gasoline and other products at its

19 ⁹¹ Refining History, *supra* note 20, at 5.

20 ⁹² *Id.* at 6; Shell, *Puget Sound Refinery*, [https://www.shell.us/about-us/projects-and-](https://www.shell.us/about-us/projects-and-locations/puget-sound-refinery.html)
21 [locations/puget-sound-refinery.html](https://www.shell.us/about-us/projects-and-locations/puget-sound-refinery.html) (last visited May 8, 2018).

22 ⁹³ Refining History, *supra* note 20, at 7.

23 ⁹⁴ Shell, *Shell Aids Recovery of Pacific Northwest’s Most Iconic Species*,
[https://www.shell.us/sustainability/conservation/conservation-activities/shell-aids-recovery-of-](https://www.shell.us/sustainability/conservation/conservation-activities/shell-aids-recovery-of-killer-whales.html)
24 [killer-whales.html](https://www.shell.us/sustainability/conservation/conservation-activities/shell-aids-recovery-of-killer-whales.html) (last accessed May 8, 2018).

25 ⁹⁵ Refining History, *supra* note 20, at 7, 31.

26 ⁹⁶ *Id.* at 27 and n.112.

27 ⁹⁷ IRS Approval Terminals (as of Apr. 30, 2018), https://www.irs.gov/pub/irs-utl/tcn_db.pdf;
28 Washington State Department of Ecology, *Shell Oil Harbor Island Terminal*,
<https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=5051> (last visited May 8, 2018).

⁹⁸ <https://www.shell.us/motorist/gas-station-near-me.html>.

1 branded gasoline stations, including Shell-branded retail stations in Washington. Shell promotes
 2 gasolines sales by offering consumers, through its interactive website, cents per gallon discounts
 3 off every gallon of Shell Fuel for the first two months after they open an account, including
 4 Shell-branded retail stations in Washington.

5 **III. FOSSIL FUELS ARE THE PRIMARY CAUSE OF GLOBAL WARMING**

6 79. Production of fossil fuels for combustion causes global warming. When used as
 7 intended, fossil fuels release greenhouse gases, including carbon dioxide (CO₂) and methane,
 8 which trap atmospheric heat and increase global temperatures. Carbon dioxide is by far the most
 9 important greenhouse gas because of the combustion of massive amounts of fossil fuels.

10 80. Scientists have known for over a century that the use of fossil fuels emits carbon
 11 dioxide and that carbon dioxide is a greenhouse gas.

12 81. In 1896, Svante Arrhenius, a Nobel-prize winning scientist, published calculations
 13 projecting temperature increases that would be caused by increased carbon dioxide
 14 concentrations in the atmosphere due to the burning of fossil fuels.⁹⁹

15 82. By 1957, scientists at the Scripps Institute published a warning in the peer-
 16 reviewed literature that global warming “may become significant during future decades if
 17 industrial fuel combustion continues to rise exponentially” and that “[h]uman beings are now
 18 carrying out a large scale geophysical experiment” on the entire planet.¹⁰⁰

19 83. In 1960, scientist Charles D. Keeling published results establishing that
 20 atmospheric carbon dioxide concentrations were in fact rising.¹⁰¹

22 ⁹⁹ Arrhenius, Svante (1896). “On the Influence of Carbonic Acid in the Air Upon the
 23 Temperature of the Ground.” *Philosophical Magazine and Journal of Science* 41: 237-76,
 available at http://www.rsc.org/images/Arrhenius1896_tcm18-173546.pdf.

24 ¹⁰⁰ Revelle, Roger, and Hans E. Suess (1957). “Carbon Dioxide Exchange between
 25 Atmosphere and Ocean and the Question of an Increase of Atmospheric CO₂ During the Past
 Decades.” *Tellus* 9: 18-27, available at <http://onlinelibrary.wiley.com/doi/10.1111/j.2153-3490.1957.tb01849.x/epdf>.

26 ¹⁰¹ Keeling, Charles D. (1960). “The Concentration and Isotopic Abundances of Carbon
 27 Dioxide in the Atmosphere.” *Tellus* 12: 200-203, available at
 28 <http://onlinelibrary.wiley.com/doi/10.1111/j.2153-3490.1960.tb01300.x/epdf>.

84. By 1979, the National Academy of Sciences, which is charged with providing independent, objective scientific advice to the United States government, concluded that there was “incontrovertible evidence” that carbon dioxide levels were increasing in the atmosphere as a result of fossil fuel use, and predicted that a doubling of atmospheric carbon dioxide would cause an increase in global surface temperatures of between 1.5°C and 4.5°C (2.7°F and 8.1°F), with a probable increase of 3°C (5.4°F).¹⁰²

85. In 1983, the United States Environmental Protection Agency (“EPA”) issued a landmark report, which confirmed both that “increases in atmospheric CO₂ primarily result from the use of fossil fuels” and that such “increases in atmospheric carbon dioxide (CO₂) and other ‘greenhouse’ gases will substantially raise global temperatures.”¹⁰³

86. In 1988, NASA scientist Dr. James E. Hansen testified to the U.S. Senate’s Energy and Natural Resources Committee that “[t]he greenhouse effect has been detected, and it is changing our climate now.”¹⁰⁴

87. More recent research has confirmed and expanded on these earlier findings. In 1988, the United Nations established the Intergovernmental Panel on Climate Change (“IPCC”) to assess the scientific and technical information relevant to global warming, and to provide advice to all parties to the U.N. Framework Convention on Climate Change, including the United States. The IPCC issues periodic assessment reports, which have become the standard scientific references on global warming. Defendant Exxon has recognized that the IPCC is the leading scientific authority on climate change.

88. In 1990, the IPCC issued its First Assessment Report (“FAR”). It stated that “we are certain” that “emissions resulting from human activities are substantially increasing the atmospheric concentrations of the greenhouse gases,” including carbon dioxide and methane, and

¹⁰² See Carbon Dioxide and Climate, *supra* note 1, at vii, 16.

¹⁰³ United States EPA, *Can We Delay a Greenhouse Warming?* (Sept. 1983), available at <https://bit.ly/2gRIIN1>.

¹⁰⁴ *Greenhouse Effect & Global Climate Change: Hearing Before the S. Comm. on Energy & Natural Resources*, 100th Cong. 40 (1988) (statement of Dr. James Hansen, Director, NASA Goddard Institute for Space Studies).

1 that “these increases will enhance the greenhouse effect, resulting on average in an additional
 2 warming of the Earth’s surface.”¹⁰⁵ The IPCC’s FAR also predicted that a “Business-as-Usual”
 3 scenario (*i.e.*, a future in which fossil fuel production and associated emissions continue to
 4 increase) would cause global mean temperature during the next century to increase at a rate
 5 “greater than that seen over the past 10,000 years,” and “will result in a likely increase in global
 6 mean temperature of about 1°C [1.8°F] above the present value by 2025 and 3°C [5.4°F] before
 7 the end of the next century”—higher than temperatures have been in the last 150,000 years.¹⁰⁶
 8 The FAR also predicted that business-as-usual would result in substantial sea level rise by
 9 2100.¹⁰⁷

10 89. The FAR further stated “with confidence” that continued emissions of carbon
 11 dioxide “at present rates would commit us to increased concentrations for centuries ahead,” and
 12 that immediate reductions were required to stabilize carbon dioxide concentrations.

13 90. In 1995, in its Second Assessment Report (“SAR”), the IPCC concluded that the
 14 “balance of evidence suggests a discernible human influence on global climate.” This causal
 15 finding was profoundly important as confirmation that human-caused global warming had now
 16 been detected. By 2001, the IPCC strengthened its causal conclusion, stating that “there is new
 17 and stronger evidence that most of the observed warming observed over the last 50 years is
 18 attributable to human activities” and that it was “likely” (meaning a 66% to 90% chance of being
 19 true) that the observed warming was “due to the increase in greenhouse gas concentrations.”¹⁰⁸
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 21
 22

23 ¹⁰⁵ IPCC Working Group I, CLIMATE CHANGE: THE IPCC SCIENTIFIC ASSESSMENT at xi (J.T.
 24 Houghton et al. eds., Cambridge University Press 1990), available at
https://www.ipcc.ch/ipccreports/far/wg_I/ipcc_far_wg_I_spm.pdf.

25 ¹⁰⁶ *Id.* at xi, xxviii.

26 ¹⁰⁷ *Id.* at xi.

27 ¹⁰⁸ IPCC Working Group I, Intergovernmental Panel on Climate Change, CLIMATE CHANGE
 28 2001, THE SCIENTIFIC BASIS at ix, 10 (J.T. Houghton et al. eds., Cambridge University Press
 2001), available at https://www.ipcc.ch/ipccreports/tar/wg1/pdf/WG1_TAR-FRONT.PDF.

1 The U.S. National Academy of Sciences reviewed this finding and concluded that it was
2 accurate.¹⁰⁹

3 91. The IPCC issued its most recent report, the Fifth Assessment, in 2013–2014. It
4 states that it is “extremely likely” (95 to 100 percent likely) that “human influence has been the
5 dominant cause of the observed warming since the mid-20th century.”¹¹⁰ And the federal
6 government’s Fourth National Climate Assessment Report, issued in the fall of 2017 states:
7 “This assessment concludes, based on extensive evidence, that it is extremely likely that human
8 activities, especially emissions of greenhouse gases, are the dominant cause of the observed
9 warming since the mid-20th century. For the warming over the last century, there is no
10 convincing alternative explanation supported by the extent of the observational evidence.”¹¹¹

11 92. Upon information and belief, Defendants have maintained scientific staffs for
12 decades who have kept track of the climate science as these warnings and conclusions have been
13 issued.

14 93. The increase in atmospheric carbon dioxide caused by the combustion of fossil
15 fuels has been clearly documented—and measured. Carbon dioxide from fossil fuels has a
16 chemical fingerprint and is the culprit; natural sources of carbon dioxide were in balance prior to
17 the use of fossil fuels and are not a cause of the global warming problem. Today, due primarily
18 to the combustion of fossil fuels produced by Defendants and others, the atmospheric level of
19 carbon dioxide is 410 ppm, higher than at any time during human civilization and likely higher
20
21
22

23 ¹⁰⁹ National Research Council, CLIMATE CHANGE SCIENCE: AN ANALYSIS OF SOME KEY
QUESTIONS I (The National Academies Press 2001).

24 ¹¹⁰ IPCC Working Group I, Intergovernmental Panel on Climate Change, CLIMATE CHANGE
25 2013, THE PHYSICAL SCIENCE BASIS 17 (Thomas F. Stocker et al. eds., Cambridge University
Press 2017), available at [https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/
WG1AR5_SPM_FINAL.pdf](https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf).

26 ¹¹¹ Donald J. Wuebbles et al., U.S. Global Change Research Program, CLIMATE SCIENCE
27 SPECIAL REPORT: FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME I at 12-34 (2017),
available at <https://science2017.globalchange.gov/chapter/executive-summary/>.
28

than any level in millions of years.¹¹² The result has been dramatic planetary warming: sixteen of earth's seventeen warmest years in the 136-year period of global temperature measurements have occurred since 2001, and 2016 was the warmest year on record.¹¹³ As of March 2018, there were 399 months in a row that were warmer than the 20th century average.¹¹⁴ The years 2014, 2015, and 2016 were the three hottest years ever recorded in Washington since modern temperature records were first taken in 1895.¹¹⁵ Washington warmed over 1.5°F since 1895.¹¹⁶

94. Global warming is most commonly expressed in terms of a global average temperature change. Until recently, the global average temperature was quite stable over the past 10,000 years. However, the global average temperature has increased over the last century by 1.8°F (1°C)—an extraordinarily rapid and unprecedented rate of change not seen in thousands of years of human history. Most of this warming has occurred since 1970. GHG pollution from the burning of fossil fuels is the dominant cause. By way of comparison, the global average temperature at the depths of the last ice age 20,000 years ago was only about 7°F to 11°F cooler than today, a time when New York City was buried under the Laurentide Ice Sheet. Thus, differences of just a few degrees in global average temperature constitute dramatic changes to our climate, and are the difference between our current climate, an ice age, and the catastrophic changes that global warming threatens to bring in the future. Globally, approximately 1°C

¹¹² Brian Kahn, *We Just Breached the 410 PPM Threshold for CO₂*, SCIENTIFIC AMERICAN (Apr. 21, 2017), available at <https://www.scientificamerican.com/article/we-just-breached-the-410-ppm-threshold-for-co2/>.

¹¹³ Griggs et al., *Rising Seas in California: an update on sea-level rise science* 14 (Apr. 2017), available at <http://www.opc.ca.gov/webmaster/ftp/pdf/docs/rising-seas-in-california-an-update-on-sea-level-rise-science.pdf>

¹¹⁴ NOAA, State of the Climate: Global Climate Report for March 2018 (Apr. 2018), available at <https://www.ncdc.noaa.gov/sotc/global/201803>.

¹¹⁵ NOAA, National Centers for Environmental Information, available at <https://www.ncdc.noaa.gov/temp-and-precip/climatological-rankings/index.php?periods%5B%5D=12¶meter=tavg&state=4&div=0&month=12&year=2016#ranks-form>.

¹¹⁶ NOAA Climate at a Glance, https://www.ncdc.noaa.gov/cag/statewide/time-series/45/tavg/12/12/1895-2017?base_prd=true&firstbaseyear=1901&lastbaseyear=2000&trend=true&trend_base=10&firsttrendyear=1895&lasttrendyear=2017/; see also .Snover, *infra* note 209.

(1.8°F) of the temperature rise already has occurred, due primarily to carbon dioxide and methane emissions from the combustion and use of fossil fuels.

95. Ongoing and future warming caused by past and ongoing use of massive quantities of fossil fuels will cause increasingly severe harm to King County through accelerating sea level rise, among other impacts. In 2013, the IPCC projected that between 2081 and 2100, the global average surface temperature will have increased by 4.7°F to 8.6°F under business-as-usual, *i.e.*, with continued massive levels of fossil fuel production. Global warming causes sea level rise by melting glaciers and sea ice, and by causing seawater to expand.¹¹⁷ This acceleration of sea level rise is unprecedented in the history of human civilization. Since 1990, the rate of sea level rise has more than doubled and it continues to accelerate. The rate of ice loss from the Greenland and Antarctic Ice Sheets is increasing, and these ice sheets soon will become the primary contributor to global sea level rise. With production of fossil fuels continuing on its business-as-usual trajectory, “Sea level is projected to continue rising through the 21st century, increasing by as much as 56 inches in the Puget Sound region by 2100 (relative to 2000).”¹¹⁸ This would be catastrophic for King County and the region.

96. The Earth’s climate can undergo an abrupt and dramatic change when a radiative forcing agent, such as carbon dioxide, causes the climate system to reach a tipping point. Defendants’ massive production of fossil fuels increases the risk of reaching that tipping point, triggering a sudden and potentially catastrophic change in climate. The rapidity of an abrupt climate shift would magnify all the adverse effects of global warming. Crossing a tipping point threshold also could lead to rapid disintegration of ice sheets on Greenland and/or Antarctica, resulting in large and rapid increases in sea level rise.

¹¹⁷ IPCC, *Climate Change 2013, The Physical Science Basis*, *supra* note 110, at 11.

¹¹⁸ Mauger, G.S., et al. State of Knowledge: Climate Change in Puget Sound. Report prepared for the Puget Sound Partnership and the National Oceanic and Atmospheric Administration. Climate Impacts Group, University of Washington, Seattle. doi:10.7915/CIG93777 (“State of Knowledge”) at 4-3.

IV. DEFENDANTS HAVE PRODUCED MASSIVE QUANTITIES OF FOSSIL FUELS AND HAVE CONTINUED TO DO SO EVEN AS GLOBAL WARMING HAS BECOME GRAVELY DANGEROUS

97. For many years, Defendants have produced massive quantities of fossil fuels that, when combusted, emit carbon dioxide, the most important greenhouse gas. Each of the Defendants, including through their predecessor companies, subsidiaries, and agents, upon information and belief, have been producing fossil fuels continuously for over a hundred years. Additionally, one of Defendants' primary fossil fuel products, natural gas, is composed of methane, which is the second most important greenhouse gas and which, as Defendants know, routinely escapes into the atmosphere from facilities operated by Defendants' customers and also from consumer use. The greenhouse gases from the usage of Defendants' fossil fuels remain in the atmosphere for long periods of time: a substantial portion of carbon dioxide emissions remains in the atmosphere for over 1,000 years after they are emitted.¹¹⁹ As noted above, Defendants have produced such vast quantities of fossil fuels that they are five of the ten largest producers in all of history, with most of the carbon dioxide that has built up in the atmosphere from the use of their products dating from 1980 or later. The cumulative greenhouse gases in the atmosphere attributable to each Defendant has increased the global temperature and contributed to sea level rise, including in King County.

98. Once Defendants produce fossil fuels by, for example, extracting oil from the ground, those fossil fuels are used exactly as intended and emit carbon dioxide.

99. Defendants are quantitatively and qualitatively different from other contributors to global warming:

a) Recent research demonstrates that just 100 fossil fuel producers are responsible for 62% of all greenhouse gas emissions from industrial sources since the dawn of the Industrial Revolution and for 71% of emissions since 1988, that over 90% of these emissions are attributable to the fossil fuels that they produce and sell (rather than emit from their own operations), and that most of these emissions have occurred since 1988.

¹¹⁹ IPCC, *Climate Change 2013, The Physical Science Basis*, *supra* note 110, at 28.

b) Among these 100 producers, Defendants are the five largest, investor-owned producers of fossil fuels in the world, as measured by the cumulative carbon and methane pollution generated from the use of their fossil fuels, according to published, peer-reviewed research.¹²⁰ Upon information and belief, Defendants are, respectively, the first (Chevron), second (Exxon), fourth (BP), sixth (Shell) and ninth (ConocoPhillips) largest cumulative producers of fossil fuels worldwide from the mid-19th century to present.

c) Defendants are collectively responsible, through their production, marketing, and sale of fossil fuels, for over 11% of all the carbon and methane pollution from industrial sources that has accumulated in the atmosphere since the dawn of the Industrial Revolution.¹²¹

d) Despite their internal warnings, an overwhelming scientific consensus on the unfolding imminent catastrophe, and actual gravely dangerous impacts from global warming, Defendants to this day maintain high levels of fossil fuel production. For example, in 2017, each of the five Defendants produced between 1.4 million and 4.0 million barrel of oil equivalents *per day*. This production will intensify future warming and King County's injuries from sea level rise.

e) Defendants, moreover, are qualitatively different from other contributors to the harm given their in-house scientific resources, early knowledge of global warming, commercial promotions of fossil fuels as beneficent even in light of their knowledge to the contrary, and efforts to protect their fossil fuel market by downplaying the risks of global warming.

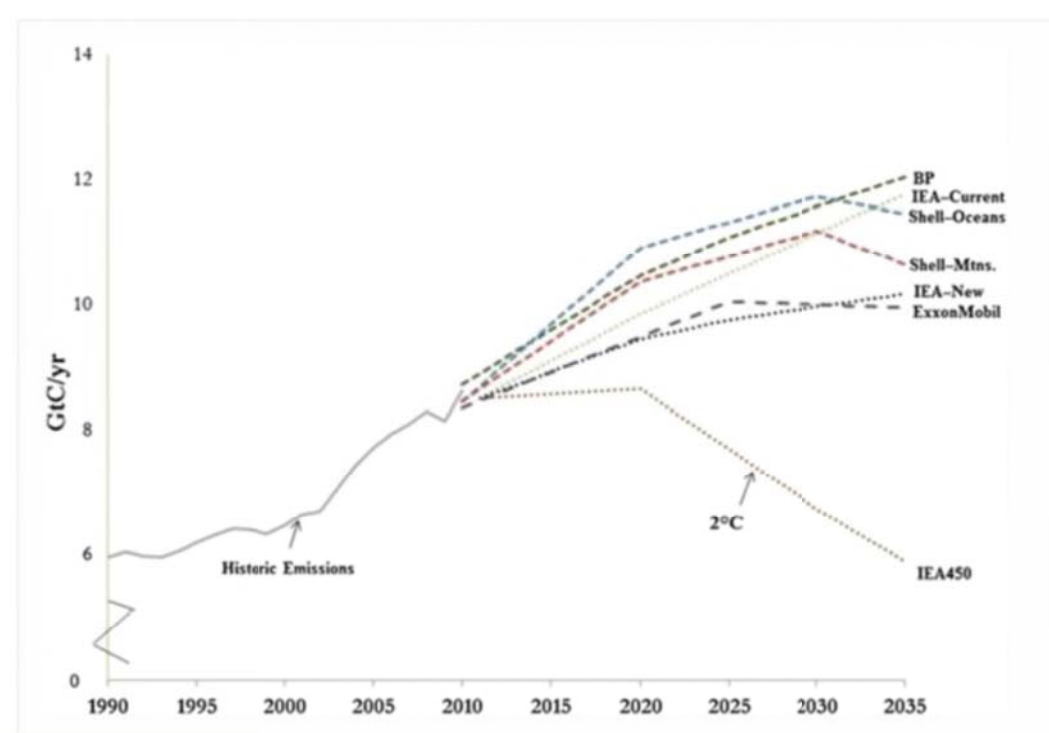
f) Defendants have in the last ten years or more produced large amounts of unconventional, high carbon-intensity fossil fuels—*i.e.*, fuels that are responsible for more carbon emitted per unit of energy than other fuels, and that therefore contribute

¹²⁰ Richard Heede, *Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers, 1854–2010*, 122 CLIMATIC CHANGE 229–241 (Jan. 2014).

¹²¹ *Id.*

disproportionately to global warming. For example, Chevron, Exxon, BP, and ConocoPhillips produce significant amounts of fossil fuels from tar sands in Canada. Shell, until recently, was also responsible for significant tar sands production. Exxon has publicly promoted tar sands production as “a significant, secure energy source for the United States,” and ConocoPhillips has said this production is “a significant part of the world’s energy future.”¹²²

g) Defendants’ conduct will continue to cause ongoing and increasingly severe harms to King County because Defendants are committed to a business model of massive fossil fuel production that they know causes a gravely dangerous rate of global warming. The following graph from a 2015 study published in the peer-reviewed scientific literature demonstrates the grave indifference Defendants BP, Shell, and Exxon have for human safety and welfare.



¹²² Exxon, *Canadian Oil Sands*, <http://aboutnaturalgas.com/en/current-issues/oil-sands/canadian-oil-sands/overview> (last visited May 8, 2018); ConocoPhillips Canada, *Oil Sands*, <http://www.conocophillips.ca/our-operations/oil-sands/Pages/default.aspx> (last visited Jan. 9, 2018).

The graph compares BP, Exxon, and Shell's projections of worldwide total future emissions¹²³—projections upon which they make long-term business plans—to the International Energy Agency ("IEA") 450 emissions trajectory necessary to prevent global warming from exceeding a 2°C (3.6°F) increase over the pre-industrial temperature.¹²⁴ The 2°C level of global warming is widely considered to be a red line of highly dangerous global warming. Upon information and belief, all Defendants base their long-term business plans upon similar projections.

V. DEFENDANTS HAVE PRODUCED MASSIVE AMOUNTS OF FOSSIL FUELS DESPITE HAVING FULL KNOWLEDGE FROM THEIR IN-HOUSE SCIENTIFIC STAFF, OR FROM THE API, THAT FOSSIL FUELS WOULD CAUSE GLOBAL WARMING

100. For decades, Defendants have known that their fossil fuel products pose risks of "severe" and even "catastrophic" impacts on the global climate through the work and warnings of their own scientists and/or through their trade association, the API. Defendants, large and sophisticated companies devoted to researching significant issues relevant to fossil fuels, also were aware of significant scientific reports on climate change science and impacts at the time they were issued. Yet each Defendant decided to continue its conduct and commit itself to massive fossil fuel production. This was a deliberate decision to place company profits ahead of human safety and well-being and property, and to foist onto the public the costs of abating and adapting to the public nuisance of global warming.

101. The API is a national trade association that represents the interests of America's oil and natural gas industry. At all relevant times, Defendants, their corporate predecessors, and/or their operating subsidiaries over which they exercise substantial control, have been members of the API. On information and belief, the API has acted as Defendants' agent with respect to global warming, received funding from Defendants for the API's global warming initiatives, and shared with Defendants the information on global warming described herein.

¹²³ In gigatons of carbon per year.

¹²⁴ Peter C. Frumhoff, et al., *The climate responsibilities of industrial carbon producers*, 132 CLIMATIC CHANGE 157, 167 (Sept. 2015), available at <https://link.springer.com/article/10.1007/s10584-015-1472-5>.

102. Beginning in the 1950s, the API repeatedly warned its members that fossil fuels posed a grave threat to the global climate.

103. The API's warnings to Defendants included:

a) In 1951, the API launched a project to research air pollution from petroleum products, and attributed atmospheric carbon to fossil fuel sources.¹²⁵ By 1968, the API's scientific consultant reported to the API that carbon dioxide emissions were "almost certain" to produce "significant" temperature increases by 2000, and that these emissions were almost certainly attributable to fossil fuels. The report warned of "major changes in the earth's environment" and a "rise in sea levels," and concluded: "there seems to be no doubt that the potential damage to our environment could be severe."¹²⁶

b) Between 1979 and 1983, the API and Defendants, their predecessors, and/or agents formed a task force to monitor and share climate research, initially called the "CO₂ and Climate Task Force" and later renamed the "Climate and Energy Task Force" ("Task Force"). The API kept and distributed meeting minutes to Task Force members. Task Force members included, in addition to API representatives, scientists from Amoco (a predecessor to BP); Standard Oil of Washington, Texaco, and Gulf Oil Corp. (predecessors to Chevron); Exxon Research and Engineering and Mobil (predecessors to or subsidiaries of current Exxon); Shell; and others. In 1980, the Task Force invited Dr. J.A. Laurman, a "recognized expert in the field of CO₂ and climate," to make a presentation. Attendees to the presentation included scientists and executives from Texaco (a predecessor to Chevron), Exxon, and SOHIO (a predecessor to BP). Dr. Laurman's written presentation informed the Task Force that there was a "Scientific Consensus on the Potential for Large Future Climatic Response to Increased CO₂ Levels." He

¹²⁵ Charles A. Jones (1958) A Review of the Air Pollution Research Program of the Smoke and Fumes Committee of the American Petroleum Institute, Journal of the Air Pollution Control Association, 8:3, 268-272, DOI: 10.1080/00966665.1958.10467854, available at <https://www.smokeandfumes.org/#/documents/document9>.

¹²⁶ E. Robinson & R.C. Robbins, Final Report, Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants, SRI Project PR-6755, prepared for American Petroleum Institute, at 109-110, available at <https://www.smokeandfumes.org/#/documents/document16>.

1 further informed the Task Force in his presentation that, though the exact temperature increases
 2 were difficult to predict, the “physical facts agree on the probability of large effects 50 years
 3 away.” He warned the Task Force of a 2.5°C (4.5°F) global temperature rise by 2038, which
 4 would likely have “MAJOR ECONOMIC CONSEQUENCES,” and a 5°C (9°F) rise by 2067,
 5 which would likely produce “GLOBALLY CATASTROPHIC EFFECTS.” He also suggested
 6 that, despite uncertainty, “THERE IS NO LEEWAY” in the time for acting. API minutes show
 7 that the Task Force discussed topics including “the technical implications of energy source
 8 changeover,” “ground rules for energy release of fuels and the cleanup of fuels as they relate to
 9 CO₂ creation,” and researching “the Market Penetration Requirements of Introducing a New
 10 Energy Source into World Wide Use.”¹²⁷ The Task Force even asked the question “what is the
 11 50 year future of fossil fuels?”

12 (c) In March 1982, an API-commissioned report showed the average increase
 13 in global temperature from a doubling of atmospheric concentrations of CO₂ and projected,
 14 based upon computer modeling, global warming of between 2°C and 3.5°C (3.6°F and 6.3°F).
 15 The report projected potentially “serious consequences for man’s comfort and survival,” and
 16 noted that “the height of the sea level can increase considerably.”¹²⁸

17 104. On information and belief, Defendants were aware of the industry Task Force and
 18 API findings described above, which were distributed by the API to its members. Each
 19 Defendant (or its predecessor) was a member of the API at relevant times, or had a subsidiary
 20 that was a member of the API at relevant times. Each subsidiary passed on information it
 21 learned from the API on climate change to its parent Defendant (or Defendant’s predecessor) and
 22 acted as the agent for its parent company, which remained in charge of setting overall production
 23 levels in light of climate change and other factors.

25 ¹²⁷ CO₂ and Climate Task Force, Minutes of Meeting, at 1-2 & Attachment B, available at
 26 [http://insideclimatenews.org/sites/default/files/documents/AQ-9%20Task%20Force%20](http://insideclimatenews.org/sites/default/files/documents/AQ-9%20Task%20Force%20Meeting%20%281980%29.pdf)
[Meeting%20%281980%29.pdf](http://insideclimatenews.org/sites/default/files/documents/AQ-9%20Task%20Force%20Meeting%20%281980%29.pdf).

27 ¹²⁸ Formerly available at [http://insideclimatenews.org/sites/default/files/documents/API%20](http://insideclimatenews.org/sites/default/files/documents/API%201982%20Climate%20models%20and%20CO2%20warming.pdf)
 28 [1982%20Climate%20 models%20and%20CO2%20warming.pdf](http://insideclimatenews.org/sites/default/files/documents/API%201982%20Climate%20models%20and%20CO2%20warming.pdf) at 5.

1 105. On information and belief, each Defendant was also actually aware (at the time
2 they were made) of public statements on climate change described above, including the 1979
3 National Academy of Science findings and Dr. Hansen's 1988 testimony. Because these
4 statements were centrally relevant to Defendants' ongoing investment of billions of dollars in
5 fossil fuel production and billions of dollars in profits, and because Defendants employed experts
6 charged with evaluating climate change and other energy and regulatory trends, Defendants were
7 in a superior position to appreciate the threat described in these statements. Defendants'
8 representatives attended congressional hearings on climate change beginning as early as the late
9 1970s.

10 106. In addition to the API information, some of the Defendants produced their own
11 internal analyses of global warming.

12 107. For example, newly disclosed documents demonstrate that Exxon internally
13 acknowledged in the late 1970s and early 1980s that its products posed a "catastrophic" threat to
14 the global climate, and that fossil fuel use would have to be strictly limited to avoid severe harm.

15 a) Exxon management was informed by its scientists in 1977 that there was
16 an "overwhelming[]" consensus that fossil fuels were responsible for atmospheric carbon dioxide
17 increases. The presentation summarized a warning from a recent international scientific
18 conference that "IT IS PREMATURE TO LIMIT USE OF FOSSIL FUELS BUT THEY
19 SHOULD NOT BE ENCOURAGED." The scientist warned management in a summary of his
20 talk: "Present thinking holds that man has a time window of five to ten years before the need for
21 hard decisions regarding changes in energy strategies might become critical."¹²⁹

22 b) In a 1979 Exxon internal memo, an Exxon scientist calculated that 80% of
23 fossil fuel reserves would need to remain in the ground and unburned to avoid greater than a
24 doubling of atmospheric carbon dioxide.¹³⁰

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26 ¹²⁹ https://insideclimatenews.org/system/files_force/documents/James%20Black%201977%20Presentation.pdf at 2.

27 ¹³⁰ <http://insideclimatenews.org/sites/default/files/documents/CO2%20and%20Fuel%20Use%20Projections.pdf> at 5.
28

1 c) In a 1981 internal Exxon memo, a scientist and director at the Exxon
 2 Research and Engineering Company warned that “it is distinctly possible” that CO₂ emissions
 3 “will later produce effects which will indeed be catastrophic (at least for a substantial fraction of
 4 the earth’s population).”¹³¹

5 d) A year later, the same scientist wrote another memo to Exxon
 6 headquarters, which reported on a “clear scientific consensus” that “a doubling of atmospheric
 7 CO₂ from its pre-industrial revolution value would result in an average global temperature rise of
 8 $(3.0 \pm 1.5)^{\circ}\text{C}$ [2.7°F to 8.1°F].”¹³² The clear scientific consensus was based upon computer
 9 modeling, which Exxon would later attack as unreliable and uncertain in an effort to undermine
 10 public confidence in climate science.¹³³ The memo continued: “There is unanimous agreement
 11 in the scientific community that a temperature increase of this magnitude would bring about
 12 significant changes in the earth’s climate, including rainfall distribution and alterations in the
 13 biosphere.”

14 e) In November 1982, an Exxon internal report to management warned that
 15 “substantial climatic changes” could occur if the average global temperature rose “at least 1°C
 16 [1.8°F] above [1982] levels,” and that “[m]itigation of the ‘greenhouse effect’ would require
 17 major reductions in fossil fuel combustion.” The report then warns Exxon management that
 18 “there are some potentially catastrophic events that must be considered,” including the risk that
 19 “if the Antarctic ice sheet which is anchored on land should melt, then this could cause a rise in
 20 sea level on the order of 5 meters.” The report includes a graph demonstrating the expected
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25 ¹³¹ <http://insideclimatenews.org/sites/default/files/documents/%2522Catastrophic%2522%20Effects%20Letter%20%281981%29.pdf>.

26 ¹³² Cohen memo to Natkin at 1 (Sept. 2, 1982), available at <http://insideclimatenews.org/documents/consensus-co2-impacts-1982>.

27 ¹³³ See infra ¶ 115.
 28

1 future global warming from the “CO₂ effect” demonstrating a sharp departure from the “[r]ange
2 of natural fluctuations.” This graph is attached hereto as Exhibit 1.¹³⁴

3 f) By 1983, Exxon had created its own climate models, which confirmed the
4 main conclusions from the earlier memos. Starting by at least the mid-1980s, Exxon used its
5 own climate models and governmental ones to gauge the impact that climate change would have
6 on its own business operations and subsequently took actions to protect its own business assets
7 based upon these modeling results.¹³⁵

8 108. On April 5, 2018, investigative journalists disclosed previously unseen documents
9 relating to Shell’s early knowledge of climate change risks, in which Shell acknowledged that
10 the “changes may be the greatest in recorded history.”

11 a. Shell commissioned a “study of the greenhouse effect” at least as early as
12 1981.¹³⁶

13 b. In 1988, Shell Internationale Petroleum Maatschappij B.V., based in The
14 Hague, issued an internal report based upon 1986 research and prepared for the Shell
15 Environmental Conservation Committee entitled “The Greenhouse Effect” that was marked
16 “confidential.”¹³⁷ The report stated that “fossil fuel combustion [is] the major source of CO₂ in
17 the atmosphere” and that there is “reasonable scientific agreement that increased levels of
18 greenhouse gases would cause a global warming.”¹³⁸ The Shell report stated: “It is generally
19 accepted that the increasing concentration of CO₂ in the atmosphere is primarily determined by
20 the combustion of fossil fuels.”¹³⁹ Shell’s report recognized that an “overall reduction in fossil
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22 ¹³⁴ M. B. Glaser, Memo to R.W. Cohen et al. on “CO₂ Greenhouse Effect,” Nov. 12, 1982, at
23 2, 12-13, 28, available at <http://insideclimatenews.org/sites/default/files/documents/1982%20Exxon%20Primer%20on%20CO2%20Greenhouse%20Effect.pdf>.

24 ¹³⁵ Sara Jerving et al., *What Exxon knew about the Earth’s melting Arctic*, LOS ANGELES
25 TIMES (Oct. 9, 2015), <http://graphics.latimes.com/exxon-arctic/>.

26 ¹³⁶ The Greenhouse Effect, *infra* note 137, at 86.

27 ¹³⁷ Shell Internationale Petroleum Maatschappij B.V., *The Greenhouse Effect* (May 1988),
28 available at https://biotech.law.lsu.edu/blog/Shell_Climate_1988.pdf.

¹³⁸ *Id.* at 1.

¹³⁹ *Id.* at 17.

fuel use would of course reduce CO₂ production,” and “it is the world wide fossil fuel usage that affects the level of CO₂ in the atmosphere.”¹⁴⁰ Possible “Implications for Shell Companies” included “[c]hanging demand for our products.”¹⁴¹ The report concluded with a section entitled “Scope for Further Action,” and divided those “who at least see substance” in the global warming problem into three groups. The second group was defined to include those “who believe that the threat is real, and seek to eliminate the problem,” and listed as a potential action the “reduction of fossil fuel usage.”¹⁴² The third group was defined to include those “who believe that the threat is real and unavoidable, so that ‘learning to live with climatic change’ is the only solution,” and listed as a potential action “[a]daptation to sea level rise through . . . construction of (higher) dikes.”¹⁴³

c. The 1988 Shell internal report stated that the “most sophisticated geophysical computer models predict that . . . a doubling of [the atmospheric CO₂ concentration] could increase the global mean temperature by 1.3–3.3° C,” and while it could not pinpoint the exact amount of future warming within this range, the “potential impacts are sufficiently serious for research to be directed more to the analysis of policy and energy options than to studies of what we will be facing exactly.”¹⁴⁴ Based upon these same mathematical models, the projected warming “could create significant changes in sea level, ocean currents, precipitation patterns, regional temperature and weather.” It warned: “These changes could be larger than any that have occurred over the last 12,000 years” and that such “relatively fast and dramatic changes would impact on the human environment, future living standards and food supplies.”¹⁴⁵

d. The 1988 report further warned that the “rising level of atmospheric

¹⁴⁰ *Id.* at 28.

¹⁴¹ *Id.* at 28.

¹⁴² *Id.* at 31.

¹⁴³ *Id.*

¹⁴⁴ *Id.* at 1.

¹⁴⁵ *Id.*

carbon dioxide” could have a “substantial impact on global habitability.”¹⁴⁶ Shell stated that the “global rise in atmospheric CO₂ is well documented,” and that “[m]ore than a century ago it was already hypothesized that an increase in the CO₂ concentration of the atmosphere would lead to global warming, i.e. the so-called ‘greenhouse effect.’”¹⁴⁷ The report predicted that “regional climatic changes” would occur caused by changes in global circulation patterns, and they “will be greater than the average global changes.”¹⁴⁸ “Local temperature change” may necessitate “costly” adaptations, some of which would “drastically change the way people live and work.”¹⁴⁹

e. The Shell report also discussed the possibility of a large sea level rise: “a warming of 3°C would induce a 60-70 cm rise of the global sea level, about half of which would be due to ablation of the Greenland and Antarctic land ice, the rest to thermal expansion of the ocean; a possible subsequent disintegration of the West Antarctic Ice Sheet would result in a worldwide rise in sea level of 5-6 m[.]”¹⁵⁰ Under projected sea level rise, “[l]arge low-lying areas could be inundated (e.g. Bangladesh) and might have to be abandoned or protected effectively,” and bays and estuaries could be “permanently inundated.”¹⁵¹

f. Shell’s report recognized that the future changes could be profound: “The changes may be the greatest in recorded history. They could alter the environment in such a way that habitability would become more suitable in the one area and less suitable in the other area. Adaptation, migration and replacement could be called for. All of these actions will be costly and uncertain, but could be made acceptable.”¹⁵² It continued: “While the greenhouse effect is a global phenomenon, the consequences and many of the socio-economic implications will be

¹⁴⁶ *Id.* at 6.

¹⁴⁷ *Id.*

¹⁴⁸ *Id.* at 7.

¹⁴⁹ *Id.* at 27.

¹⁵⁰ *Id.* at 21.

¹⁵¹ *Id.* at 26.

¹⁵² *Id.* at 25.

1 regional and local with large temporal and spatial variations.”¹⁵³

2 g. Shell also predicted that its own operations would be affected by sea level
3 rise: “Direct operational consequences can be expected from a rising sea level, impacting
4 offshore installations, coastal facilities and operations (e.g. platforms, harbours, refineries,
5 depots) with an uncertain magnitude.”¹⁵⁴

6 h. The recent disclosures also demonstrate that as early as 1988 Shell was
7 taking responsibility for companywide fossil fuel production.¹⁵⁵ The 1988 report expressly
8 stated: “Fossil fuels which are marketed and used by the Group account for the production of 4%
9 of the CO₂ emitted worldwide from combustion.”¹⁵⁶ The report also includes a table entitled
10 “Contribution to global CO₂ emissions from fuels sold by the Shell Group in 1984” that supports
11 this same calculation.¹⁵⁷

12 i. In a February 1995 Shell Management Brief on Climate Change, Shell
13 stated that the “possibility of climate change caused by an enhanced greenhouse effect could
14 have major business implications for the fossil fuel industry.”¹⁵⁸ It continued: “There is a
15 general consensus that human activities have contributed to an increase in atmospheric
16 greenhouse gas concentrations.”¹⁵⁹ And it stated that “Man’s activities have contributed to
17 emissions of [greenhouse] gases from the use of fossil fuels, particularly since the Industrial
18 Revolution.”¹⁶⁰ After reviewing evidence attempting to rebut the science of climate change,
19 Shell concluded: “The arguments outlined in the last section may appear to represent a
20 formidable case against the global warming hypothesis or at least in favour of a well-grounded

21 ¹⁵³ *Id.*

22 ¹⁵⁴ *Id.* at 27.

23 ¹⁵⁵ *Id.* at 57.

24 ¹⁵⁶ *Id.* at 29.

25 ¹⁵⁷ *Id.* at 57.

26 ¹⁵⁸ Shell, *Climate Change* at 1 (Feb. 1995), available at <https://assets.documentcloud.org/documents/4411100/Document12.pdf>.

27 ¹⁵⁹ *Id.*

28 ¹⁶⁰ *Id.* at 2.

1 skepticism. However, many of them raise questions or point to uncertainties rather than offer
 2 convincing alternative positions. Those who conclude that global warming is likely argue that
 3 uncertainty applies both ways – the effects could be larger than predicted.”¹⁶¹

4 j. In a Shell “Group Scenarios 1998-2020” document, which “shows how
 5 the two [Shell] scenarios develop in selected regions of the world,” Shell posits what would
 6 happen in 2010 if a “series of violent storms causes extensive damage to the eastern coast of the
 7 US,” taking into account that “two successive IPCC reports since 1995 have reinforced the
 8 human connection to climate change.”¹⁶² Shell describes one possibility: “Following the storms,
 9 a coalition of environmental NGOs brings a class-action suit against the US government and
 10 fossil-fuel companies on the grounds of neglecting what scientists (including their own) have
 11 been saying for years: that something must be done.”¹⁶³

12 k. Shell produced a film on global warming in 1991, in which it admitted that
 13 there had been a “marked increase [in global temperatures] in the 1980s” and that the increase
 14 “does accord with computer models based on the known atmospheric processes and predicted
 15 buildup of greenhouse gases.”¹⁶⁴ It acknowledged a “serious warning” that had been “endorsed
 16 by a uniquely broad consensus of scientists” in 1990. In the film, Shell further admits that by
 17 2050 continued emissions of greenhouse gases at high levels would cause a global average
 18 temperature increase of 1.5 to 4°C (2.7 to 7.2°F); that one meter of sea level rise was likely in the
 19 next century; that “this could be disastrous;” and that there is a “possibility of change faster than
 20 at any time since the end of the ice age, change too fast, perhaps, for life to adapt without severe
 21 dislocation.”

22 109. Exxon’s and Shell’s early research and understanding of the global warming
 23 impacts of its business was not unique among Defendants. For example, at least as far back as

24 ¹⁶¹ *Id.* at 3.

25 ¹⁶² Shell, *Group Scenarios 1998-2020, Volume 2: Regions and Quantification* at 115,
 26 available at <https://assets.documentcloud.org/documents/4430284/27-2-Compiled.pdf>.

27 ¹⁶³ *Id.* at 118.

28 ¹⁶⁴ <https://www.youtube.com/watch?v=0VOWi8oVXmo>.

1970, Defendant BP began funding scientific research in England to examine the possible future climate changes from greenhouse gas emissions.¹⁶⁵

VI. DESPITE THEIR EARLY KNOWLEDGE THAT GLOBAL WARMING WAS REAL AND POSED GRAVE THREATS, DEFENDANTS PROMOTED FOSSIL FUELS FOR PERVASIVE USE WHILE DOWNPLAYING THE REALITY AND RISKS OF GLOBAL WARMING

110. Defendants have extensively promoted fossil fuel use in massive quantities through affirmative advertising for fossil fuels and downplaying global warming risks. First, Defendants promoted massive use of fossil fuels by misleading the public about global warming by emphasizing the uncertainties of climate science and through the use of paid denialist groups and individuals—a striking resemblance to Big Tobacco’s propaganda campaign to deceive the public about the adverse health effects of smoking. Defendants’ campaign inevitably encouraged fossil fuel consumption at levels that were (as Defendants knew) certain to severely harm the public. Second, Defendants’ fossil fuel promotions through frequent advertising for their fossil fuel products, including promotions claiming that consumption at current and even expanded levels is “responsible” or even “respectful” of the environment, have encouraged continued fossil fuel consumption at massive levels that Defendants knew would harm the public.¹⁶⁶

A. Defendants borrowed the Big Tobacco playbook in order to promote their products.

111. Notwithstanding Defendants’ early knowledge of climate change, Defendants have engaged in advertising and communications campaigns intended to promote their fossil fuel products by downplaying the harms and risks of global warming. Initially, the campaign tried to show that global warming was not occurring. More recently, the campaign has sought to minimize the risks and harms from global warming. The campaign’s purpose and effect has

¹⁶⁵ Sir Solly Zuckerman, Chief Scientist, Letter to Vice Chancellor, University of Bath, 9th May 1970, PRO ref CAB 163/272 #122885, “Long-term climate changes and their effects.”

¹⁶⁶ ConocoPhillips, the changing energy landscape, available at <http://www.conocophillips.com/who-we-are/our-company/spirit-values/responsibility/Pages/the-changing-energy-landscape.aspx>; Chevron TV ad (2009), available at <https://www.youtube.com/watch?v=-KyjTGMVTkA>.

1 been to help Defendants continue to produce fossil fuels and sell their products on a massive
 2 scale. This campaign was executed in large part by front groups funded by Defendants, either
 3 directly or through the API, and through statements made by Defendants directly.

4 112. One front group was the Global Climate Coalition (“GCC”). The GCC operated
 5 between 1989 and 2002. Its members included the API, and predecessors or subsidiaries of
 6 Defendants. William O’Keefe, former president of the GCC, was also a former executive of the
 7 API.¹⁶⁷

8 113. The GCC spent millions of dollars on campaigns to discredit climate science,
 9 including \$13 million on one ad campaign alone. The GCC distributed a video to hundreds of
 10 journalists, which claimed that carbon dioxide emissions would increase crop production and
 11 feed the hungry people of the world.¹⁶⁸

12 114. However, internal GCC documents admitted that their “contrarian” climate
 13 theories were unfounded. In December 1995, the GCC’s Science and Technology Advisory
 14 Committee (“GCC-STAC”), whose members included employees of Mobil Oil Corporation (an
 15 Exxon predecessor) and the API, drafted a primer on the science of global warming for GCC
 16 members. The primer concluded that the GCC’s contrarian theories “do not offer convincing
 17 arguments against the conventional model of greenhouse gas emission-induced climate change.”
 18 Due to this inconvenient conclusion, at its next meeting, in January 1996, the GCC-STAC
 19 decided simply to drop this seven-page section of the report. Nonetheless, for years afterward,
 20 the GCC and its members continued to tout their contrarian theories about global warming, even
 21 though the GCC had admitted internally these arguments were invalid.

22 115. In February 1996, an internal GCC presentation summarized findings from the
 23 1995 IPCC Second Assessment Report and stated that the projected temperature change by 2100
 24

25 ¹⁶⁷ Jeff Nesmith, *Industry Promotes Skeptical View of Global Warming*, COX NEWS SERVICE
 26 (May 28, 2003), available at <http://www.heatisonline.org/contentserver/objecthandlers/index.cfm?ID=4450&Method=Full>.

27 ¹⁶⁸ SourceWatch, *Global Climate Coalition*, http://www.sourcewatch.org/index.php/Global_Climate_Coalition (last updated Oct. 11, 2017).
 28

1 would constitute “an average rate of warming [that] would probably be greater than any seen in
 2 the past 10,000 years.” The presentation noted “potentially irreversible” impacts and stated that
 3 predicted health impacts were “mostly adverse impacts, with significant loss of life.” The
 4 document simultaneously reported the IPCC’s scientific conclusions regarding climate change
 5 and laid out points for questioning those conclusions, including the IPCC’s 1995 finding that
 6 human-induced global warming had now been detected even though the GCC-STAC had
 7 concluded just two months before that the contrarian theories of causation were scientifically
 8 unconvincing.

9 116. Over at least the last nineteen years, Exxon in particular has paid researchers and
 10 front groups to create uncertainties about basic climate change science and used denialist groups
 11 to attack well-respected scientists. These were calculated business decisions by Exxon to
 12 undermine climate change science and bolster production of fossil fuels.¹⁶⁹

13 117. Between 1998 and 2014, Exxon paid millions of dollars to organizations to
 14 promote disinformation on global warming. During the early to mid-1990s, Exxon directed
 15 some of this funding to Dr. Fred Seitz, Dr. Fred Singer, and/or Seitz and Singer’s Science and
 16 Environmental Policy Project (“SEPP”) in order to launch repeated attacks on mainstream
 17 climate science and IPCC conclusions, even as Exxon scientists participated in the IPCC.¹⁷⁰
 18 Seitz, Singer, and SEPP had previously been paid by the tobacco industry to create doubt in the
 19 public mind about the hazards of smoking.¹⁷¹ Seitz and Singer were not climate scientists.

21 ¹⁶⁹ Neela Banerjee et al., *Exxon’s Own Research Confirmed Fossil Fuels’ Role in Global*
 22 *Warming Decades Ago*, INSIDE CLIMATE NEWS (Sept. 16, 2015), <http://insideclimatenews.org/news/15092015/Exxons-own-research-confirmed-fossil-fuels-role-in-global-warming>; Jeffrey
 23 Ball, *Exxon Chief Makes A Cold Calculation on Global Warming*, WALL STREET JOURNAL (June 14, 2005).

24 ¹⁷⁰ Union of Concerned Scientists, *Smoke, Mirrors & Hot Air: How ExxonMobil Uses Big*
 25 *Tobacco’s Tactics to Manufacture Uncertainty on Climate Science* (Jan. 2007), available at
 26 http://www.ucsusa.org/assets/documents/global_warming/exxon_report.pdf; Exxonsecrets.org,
 27 *Factsheet: Science and Environmental Policy Project, SEPP*, <http://www.exxonsecrets.org/html/orgfactsheet.php?id=65> (last visited May 8, 2018).

28 ¹⁷¹ SourceWatch, *S. Fred Singer*, http://www.sourcewatch.org/index.php/S._Fred_Singer
 (last updated Oct. 11, 2017); SourceWatch, *Frederick Seitz*, http://www.sourcewatch.org/index.php/Frederick_Seitz (last updated June 26, 2017).

1 118. Exxon's promotion of fossil fuels also entailed the funding of denialist groups that
 2 attacked well-respected scientists Dr. Benjamin Santer and Dr. Michael Mann, maligning their
 3 characters and seeking to discredit their scientific conclusions with media attacks and bogus
 4 studies in order to undermine the IPCC's 1995 and 2001 conclusions that human-driven global
 5 warming is now occurring.

6 119. One of Defendants' most frequently used denialists has been an aerospace
 7 engineer named Wei Hock Soon. Between 2001 and 2012, various fossil fuel interests, including
 8 Exxon and the API, paid Soon over \$1.2 million.¹⁷² Soon was the lead author of a 2003 article
 9 which argued that the climate had not changed significantly. The article was widely promoted
 10 by other denial groups funded by Exxon, including via "Tech Central Station," a website
 11 supported by Exxon.¹⁷³ Soon published other bogus "research" in 2009, attributing global
 12 warming to solar activity, for which Exxon paid him \$76,106.¹⁷⁴ This 2009 grant was made
 13 several years after Exxon had publicly committed not to fund global warming deniers.¹⁷⁵

14 120. Until approximately early 2016, the API's website referred to global warming as
 15 "possible man-made warming" and claimed that the human contribution is "uncertain." The API
 16 removed this statement from its website in 2016 when journalistic investigations called attention
 17 to the API's misleading statements on global warming and its participation in the climate change
 18 Task Force during the late 1970s and early 1980s.

19 121. In 2000, Exxon took out an advertisement on the Op-Ed page of the New York
 20 Times entitled "Unsettled Science." The advertisement claimed that "scientists remain unable to
 21
 22

23 ¹⁷² Justin Gillis & John Schwartz, *Deeper Ties to Corporate Cash for Doubtful Climate*
 24 *Researcher*, NEW YORK TIMES (Feb. 21, 2015), <https://www.nytimes.com/2015/02/22/us/ties-to-corporate-cash-for-climate-change-researcher-Wei-Hock-Soon.html>.

25 ¹⁷³ Smoke, Mirrors & Hot Air, *supra* note 170, at 13-14.

26 ¹⁷⁴ <https://www.documentcloud.org/documents/682765-willie-soon-foia-grants-chart-02-08-2011.html>.

27 ¹⁷⁵ Exxon, *2007 Corporate Citizenship Report* (Apr. 30, 2008), [http://www.socialfunds.com/](http://www.socialfunds.com/shared/reports/1211896380_ExxonMobil_2007_Corporate_Citizenship_Report.pdf)
 28 [shared/reports/1211896380_ExxonMobil_2007_Corporate_Citizenship_Report.pdf](http://www.socialfunds.com/shared/reports/1211896380_ExxonMobil_2007_Corporate_Citizenship_Report.pdf).

confirm” the proposition that “humans are causing global warming.”¹⁷⁶ This was six years after the IPCC had confirmed the causal link between planetary warming and anthropogenic greenhouse gas emissions—a historic moment in climate science—and some 18 years after Exxon itself had admitted in a 1982 internal memorandum to corporate headquarters that there was “a clear scientific consensus” that greenhouse gas emissions would cause temperatures to rise.

122. On May 27, 2015, at Exxon’s annual shareholder meeting, then-CEO Rex Tillerson misleadingly downplayed global warming’s risks by stating that climate models used to predict future impacts were unreliable: “What if everything we do it turns out our models were really lousy and we achieved all of our objectives and it turned out the planet behaved differently because the models just weren’t good enough to predict it?” But as noted above, in 1982 Exxon’s scientific staff stated, based upon the climate models, that there was a “clear scientific consensus” with respect to the level of projected future global warming and starting shortly thereafter Exxon relied upon the projections of climate models, including its own climate models, in order to protect its own business assets. Tillerson’s statement reached consumers because it was reported in the press, including in Washington,¹⁷⁷ as is common when fossil fuel company CEOs make statements regarding climate change and as Exxon had reason to know would occur.

123. Until approximately early 2017, Exxon’s website continued to emphasize the “uncertainty” of global warming science and impacts: “current scientific understanding provides limited guidance on the likelihood, magnitude, or time frame” of events like temperature extremes and sea level rise.¹⁷⁸ Exxon’s insistence on crystal-ball certainty was clear

¹⁷⁶ Exxon, *Unsettled Science*, available at <https://assets.documentcloud.org/documents/705605/xom-nyt-2000-3-23-unsettledscience.pdf>.

¹⁷⁷ See, e.g., Joe Carroll & Bradley Olson, *Exxon, Chevron opt out of European Big Oil’s climate huddle*, BLOOMBERG NEWS (May 27, 2015), available at <https://www.seattletimes.com/business/exxon-chevron-opt-out-of-european-big-oils-climate-huddle/>.

¹⁷⁸ Formerly found at <http://corporate.exxonmobil.com/en/current-issues/climate-policy/meeting-global-needs/managing-climate-change-business-risks>.

1 misdirection, since Exxon knew that the fundamentals of climate science were well settled and
 2 showed global warming to present a clear and present danger.¹⁷⁹

3 **B. Defendants' direct promotion of fossil fuels**

4 124. Defendants continue to promote massive fossil fuel use by the public
 5 notwithstanding that global warming is happening, that global warming is primarily caused by
 6 their fossil fuels, and that global warming is causing severe injuries. Defendants promote the
 7 massive use of fossil fuels through advertisements lauding fossil fuels as “responsible” and
 8 “respectful” to the environment, identifying fossil fuels as the only way to sustain modern
 9 standards of living, and promoting sales of their fossil fuels without qualification. Defendants
 10 and/or their U.S. subsidiaries are members of the API. The API also promotes the benefits of
 11 fossil fuel products on behalf of Defendants and its other members.¹⁸⁰ Defendants' message to
 12 consumers is that fossil fuels may continue to be burned in massive quantities without risking
 13 significant injuries.

14 125. Defendants bombard the public and consumers with the following advertisements,
 15 although these are a mere sliver of Defendants' extensive campaigns. Defendants'
 16 advertisements must be understood in their proper context—as following Defendants' substantial
 17 early knowledge on global warming risks and impacts, and following a decades-long campaign
 18 of misleading statements on global warming that primed the pump for massive use of their fossil
 19 fuel products:

20 a) Exxon's “Lights Across America” website advertisement states that
 21 natural gas is “helping dramatically reduce America's emissions”¹⁸¹ even though natural gas is a
 22 fossil fuel causing widespread planetary warming and harm to coastal entities like King County
 23

24 ¹⁷⁹ See IPCC, CLIMATE CHANGE 2014, IMPACTS, ADAPTATION, AND VULNERABILITY,
 25 Summary for Policymakers, available at [http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/
 ar5_wgII_spm_en.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/ar5_wgII_spm_en.pdf).

26 ¹⁸⁰ API, *Consumer Information*, available at [http://www.api.org/oil-and-natural-gas/
 consumer-information](http://www.api.org/oil-and-natural-gas/consumer-information).

27 ¹⁸¹ <https://www.youtube.com/watch?v=tMu1CBjXfq4> (at 0:46).
 28

1 and the use of natural gas competes with wind and solar, which have no greenhouse gas
2 emissions.

3 b) In 2017, Shell's CEO promoted massive fossil fuel use by stating that the
4 fossil fuel industry could play a "crucial role" in lifting people out of poverty.¹⁸² A Shell website
5 promotion states: "We are helping to meet the world's growing energy demand while limiting
6 CO₂ emissions, by delivering more cleaner-burning natural gas."¹⁸³

7 c) BP touts natural gas on its website as "a vital lower carbon energy source"
8 and as playing a "crucial role" in a transition to a lower carbon future.¹⁸⁴ BP promotes continued
9 massive fossil fuel use as enabling two billion people to be lifted out of poverty.¹⁸⁵

10 d) Chevron's website implores the public that "we produce safe, reliable
11 energy products for people around the world."¹⁸⁶ Chevron also promotes massive use of fossil
12 fuels as the key to lifting people out of poverty: "Reliable and affordable energy is necessary for
13 improving standards of living, expanding the middle class and lifting people out of poverty. Oil
14 and natural gas will continue to fulfill a significant portion of global energy demand for decades
15 to come—even in a carbon-constrained scenario."¹⁸⁷ A prior Chevron advertisement still
16 available on the web promotes Chevron fossil fuels on a massive scale by stating that "our lives
17 demand oil."¹⁸⁸

18 ¹⁸² Shell, *Deliver Today, Prepare for Tomorrow* (Mar. 9, 2017), available at
19 [http://www.shell.com/media/speeches-and-articles/2017/deliver-today-prepare-for-](http://www.shell.com/media/speeches-and-articles/2017/deliver-today-prepare-for-tomorrow.html)
20 [tomorrow.html](http://www.shell.com/media/speeches-and-articles/2017/deliver-today-prepare-for-tomorrow.html) (speech delivered by Shell CEO).

21 ¹⁸³ Shell United States, *Transforming Natural Gas*, available at [http://www.shell.us/energy-](http://www.shell.us/energy-and-innovation/transforming-natural-gas.html)
22 [and-innovation/transforming-natural-gas.html](http://www.shell.us/energy-and-innovation/transforming-natural-gas.html) (last visited May 8, 2018).

23 ¹⁸⁴ BP, *Sustainability Report 2016* (Apr. 6, 2017), [https://www.bp.com/content/dam/bp/en/](https://www.bp.com/content/dam/bp/en/corporate/pdf/sustainability-report/group-reports/bp-sustainability-report-2016.pdf)
24 [corporate/pdf/sustainability-report/group-reports/bp-sustainability-report-2016.pdf](https://www.bp.com/content/dam/bp/en/corporate/pdf/sustainability-report/group-reports/bp-sustainability-report-2016.pdf); BP, *Shifting*
25 *Towards Gas*, formerly available at [http://www.bp.com/energytransition/shifting-towards-](http://www.bp.com/energytransition/shifting-towards-gas.html)
26 [gas.html](http://www.bp.com/energytransition/shifting-towards-gas.html) (last visited Jan. 8, 2018).

27 ¹⁸⁵ BP, *BP energy outlook*, available at [http://www.bp.com/en/global/corporate/energy-](http://www.bp.com/en/global/corporate/energy-economics/energy-outlook.html)
28 [economics/energy-outlook.html](http://www.bp.com/en/global/corporate/energy-economics/energy-outlook.html) (last visited May 8, 2018).

¹⁸⁶ Chevron, *Products and Services*, available at [https://www.chevron.com/operations/](https://www.chevron.com/operations/products-services)
products-services (last visited May 8, 2018).

¹⁸⁷ Chevron, *Managing Climate Change Risks*, available at [https://www.chevron.com/](https://www.chevron.com/corporate-responsibility/climate-change/managing-climate-risk)
corporate-responsibility/climate-change/managing-climate-risk (last visited May 8, 2018).

¹⁸⁸ Chevron TV ad, *supra* note 166.

e) ConocoPhillips promotes its fossil fuel products by stating that it “responsibly suppl[ies] the energy that powers modern life.”¹⁸⁹ Similarly, ConocoPhillips has the following advertising slogan on its website: “Providing energy to improve quality of life.”¹⁹⁰

126. Contrary to Defendants’ claims that the use of massive amounts of fossil fuels is required to lift people out of poverty, the IPCC has concluded: “Climate change will exacerbate multidimensional poverty in most developing countries . . . [and] will also create new poverty pockets in countries with increasing inequality, in both developed and developing countries.”¹⁹¹

127. Defendants BP and Exxon have also used long-term energy forecasts and similar reports to promote their products under the guise of expert, objective analysis. These forecasts have repeatedly sought to justify heavy reliance on fossil fuels by overstating the cost of renewable energy.

128. Defendants’ energy forecasts are aimed in substantial part at consumers and are promoted to the public through their respective websites and other direct media. Exxon continues to promote its annual “Outlook for Energy” reports in videos currently available on the Internet. But Exxon’s energy “analyses” are self-serving means of promoting fossil fuels and undercutting non-dangerous renewable energy and clean technologies. For example, Exxon has claimed in a recent forecast that natural gas is a cheaper way to reduce carbon dioxide emissions than wind or solar power while BP has claimed that solar and wind power will be more expensive in 2050 than natural gas or coal even though wind and solar are already cheaper than natural gas or coal in some circumstances.¹⁹² Exxon and BP also have understated in recent

¹⁸⁹ ConocoPhillips, *The Changing Energy Landscape*, formerly available at <http://www.conocophillips.com/who-we-are/our-company/spirit-values/responsibility/Pages/the-changing-energy-landscape.aspx>.

¹⁹⁰ ConocoPhillips, *Producing Energy*, available at <http://www.conocophillips.com/what-we-do/producing-energy/Pages/default.aspx> (last visited May 8, 2018).

¹⁹¹ Climate Change 2014, *supra* note 179, at 797.

¹⁹² Exxon, *2017 Outlook for Energy: A View to 2040* at 31, available at <http://cdn.exxonmobil.com/~media/global/files/outlook-for-energy/2017/2017-outlook-for-energy.pdf>; BP, *BP Technology Outlook* at 18 (Nov. 2015), available at <http://www.bp.com/content/dam/bp/pdf/technology/bp-technology-outlook.pdf>.

1 “forecasts” the expected market share of electric vehicles even as electric vehicle technology has
 2 taken off, prices have dropped, and GM announced (in 2015) that it was investing billions in
 3 electric cars because the “future is electric.”¹⁹³

4 129. Defendants’ reports also promote their fossil fuel products by warning consumers
 5 of supposed downsides to reducing fossil fuel use and carbon dioxide emissions. For example,
 6 Exxon’s most recent report claims that the costs of carbon dioxide reductions are “ultimately
 7 borne by consumers and taxpayers.”

8 130. These reports by BP and Exxon, and a similar one by Shell, predict massive
 9 increases in fossil fuel use over roughly the next 15 years.¹⁹⁴ This is part of a larger strategy of
 10 “mak[ing] the case for the necessary role of fossil fuels,” as BP’s chief executive stated in a
 11 moment of candor in 2015.¹⁹⁵

12 131. Yet this “case for the necessary role” is a recipe for disaster—as one of the
 13 Defendants has now finally admitted. On November 28, 2017, Shell finally acknowledged the
 14 importance of “keeping the rise in global temperatures below 2 degrees C,” and also
 15 acknowledged that this “means that, *over time*, we as society must stop adding to the stock of
 16 greenhouse gases in the atmosphere,” *i.e.*, a phase down of fossil fuels to net zero emissions.
 17 But, critically, Shell did not say when this should occur. While Shell also announced on the
 18 same day that it would be reducing the carbon footprint of its energy products by “around” half
 19 by 2050, Shell in fact was merely agreeing to reduce the carbon “intensity” of its mix of energy
 20 products (*i.e.*, the carbon emissions per unit of energy). The Shell parent expressly took

21 ¹⁹³ Exxon, *2017 Outlook for Energy*, *supra* note 192, at 18; BP, *BP Technology Outlook*,
 22 *supra* note 192, at 47; General Motors, Press Release, *GM Employees on Mission to Transform*
 23 *Transportation* (May 7, 2015), available at http://media.gm.com/media/us/en/gm/company_info/facilities/assembly/orion.detail.html/content/Pages/news/us/en/2015/may/0507-sustainability-report.html.

24 ¹⁹⁴ Shell, *New Lens Scenarios* (Mar. 2013), available at http://www.shell.com/energy-and-innovation/the-energy-future/scenarios/new-lenses-on-the-future/_jcr_content/par/relatedtopics.stream/1448477051486/08032d761ef7d81a4d3b1b6df8620c1e9a64e564a9548e1f2db02e575b00b765/scenarios-newdoc-english.pdf.

26 ¹⁹⁵ BP, *2015 Annual General Meeting: group chief executive* (Apr. 16, 2015), available at
 27 <http://www.bp.com/en/global/corporate/media/speeches/2015-annual-general-meeting-group-chief-executive.html>.

responsibility for greenhouse gas emissions from the combustion of Shell’s fossil fuel products by consumers because Shell’s carbon reduction goal involves “not just emissions from its own operations but also those produced when using Shell products.” Shell’s CEO stated that Shell would seek to reduce the carbon footprint of its products “by reducing the net carbon footprint of the full range of Shell emissions, from our operations and from the consumption of our products.” Shell has said nothing to alter the fact that its total fossil fuel production and sales, and hence the total GHG pollution from its products, may well, and likely will, go up in absolute terms. Shell’s announcement is too little and too late to avert the climate change impacts that already are occurring, and that will inevitably grow worse over the coming decades based in substantial part upon Shell and other Defendants’ past and continuing conduct and future business plans.

132. On December 11, 2017, Exxon filed a notice with the U.S. Securities & Exchange Commission that it “has decided to further enhance the Company’s disclosures” consistent with a 2017 shareholder proposal requesting that Exxon more fully disclose the impacts of climate change policies on its business, and stated that it “will seek to issue” disclosures on “energy demand sensitivities, implications of two degree Celsius scenarios, and positioning for a lower-carbon future” in the “near future.”¹⁹⁶ Shareholders have been calling on Exxon to make further detailed disclosures on how climate change will impact its business for years. Exxon’s brief announcement—which says nothing about reducing oil and gas production—will do nothing to avert climate change impacts that already are occurring, and that will inevitably grow more severe based upon Exxon and other Defendants’ past and continuing conduct and future business plans.

¹⁹⁶ Exxon, Form 8-K (Dec. 11, 2017), available at <https://www.sec.gov/Archives/edgar/data/34088/000003408817000057/r8k121117.htm> (Regulation FD Disclosure to the U.S. Secs. & Exch. Comm’n).

VII. KING COUNTY WILL INCUR SEVERE CLIMATE CHANGE INJURIES THAT WILL REQUIRE HUNDREDS OF MILLIONS IN EXPENDITURES TO ABATE THE GLOBAL WARMING NUISANCE

133. “Puget Sound is experiencing a suite of long-term changes that are consistent with those observed globally as a result of human-caused climate change.”¹⁹⁷ These include increasing air temperatures, a longer frost-free season, decreasing snow and ice cover, increasing sea level, and a possible increase in the intensity of heavy rainfall events.¹⁹⁸ The lowland areas surrounding Puget Sound warmed about +1.3°F (range: +0.7°F to +1.9°F) between 1895 and 2014, with statistically significant warming occurring in all seasons except for spring.¹⁹⁹ All but six of the years from 1980 to 2014 were warmer than the 20th century average.²⁰¹ This trend is consistent with the observed warming over the Pacific Northwest as a whole as a result of a rising greenhouse gas emissions.²⁰² ²⁰³

134. “The Puget Sound region is projected to warm rapidly during the 21st century as a result of rising greenhouse gas emissions.”²⁰⁴ Prior to mid-century, the projected increase in air

¹⁹⁷ Mauger, G.S., et al. *State of Knowledge: Climate Change in Puget Sound* at 2-1 (Nov. 2015) at 2-1, available at http://cses.washington.edu/picea/mauger/ps-sok/PS-SoK_2015.pdf. (hereinafter “State of Knowledge”).

¹⁹⁸ The range shows the 95% confidence limits for the trend estimate. *Id.*

¹⁹⁹ The range shows the 95% confidence limits for the trend estimate. *Id.* These trends as reported in State of Knowledge were determined using data from the U.S. Climate Divisional Dataset, developed by the National Centers for Environmental Information (NCEI). NCEI provides long-term climate summaries for each of the country’s 344 climate divisions. Results for the “Puget Sound Lowlands” climate division were used in the present analysis, which includes all of the low-lying land areas surrounding Puget Sound, where most of the historical weather observations are concentrated. For more information, see: <http://www.ncdc.noaa.gov/monitoring-references/maps/us-climate-divisions.php>.

²⁰⁰ State of Knowledge, *supra* note 197, at 2-2 (citing Vose, R. S. et al., 2014. Improved historical temperature and precipitation time series for US climate divisions. *Journal of Applied Meteorology and Climatology*, 53(5), 1232–1251).

²⁰¹ *Id.* at ES-2.

²⁰² Mote, P. W. et al., 2013. Climate: Variability and Change in the Past and the Future. Chapter 2, 25–40, in M.M. Dalton, P.W. Mote, and A.K. Snover (eds.) *Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities*, Washington D.C.: Island Press.

²⁰³ Abatzoglou, J. T. et al., 2014. Seasonal climate variability and change in the Pacific Northwest of the United States. *Journal of Climate*, 27(5), 2125–2142.

²⁰⁴ State of Knowledge, *supra* note 197, at 2-5.

temperatures is about the same for all greenhouse gas scenarios, a result of the fact that a certain amount of warming is already “locked in” due to past emissions. After about 2050, projected warming depends on the amount of greenhouse gases emitted globally in the coming decades.

135. “All scenarios project warming. Warming is projected to continue throughout the 21st century For the 2050s (2040–2069, relative to 1970–1999), annual average air temperature is projected to rise +4.2°F to +5.5°F, on average, for a low (RCP 4.5) and a high (RCP 8.5) greenhouse gas scenario.²⁰⁵”²⁰⁶ Much higher warming is possible after mid-century.²⁰⁷ More extreme heat events are also expected. By 2100, the projected rise in temperatures projected for the Puget Sound region is at least double that experienced in the 20th century, and could be nearly ten times as large.²⁰⁸

136. Climate change impacts on King County will also be affected by changes in Washington State and the Pacific Northwest. Average annual air temperature across the Pacific Northwest is projected to increase +4.3°F to +5.8°F, on average, for a low (RCP 4.5) and a high (RCP 8.5) greenhouse gas scenario by the 2050s (2040–2069, relative to 1950–1999).²⁰⁹ By mid-century, the Pacific Northwest is likely to regularly experience average annual temperatures that

²⁰⁵ Greenhouse gas scenarios as reported in State of Knowledge generally range from a low (RCP 4.5) to a high (RCP 8.5) greenhouse gas scenario (both of which are used in the recent IPCC report . . .). The implications of the lowest greenhouse gas scenario—RCP 2.6, which assumes aggressive reductions in emissions—are not discussed in the text of this section because there are no published projections specific to the Puget Sound region that are based on this scenario.

²⁰⁶ State of Knowledge, *supra* note 197, at 2-5. (“Projections [in State of Knowledge] stem from 10 global climate model projections, based on both a low (RCP 4.5) and a high (RCP 8.5) greenhouse gas scenario. The 10 global climate models were selected for their ability to accurately represent the climate of the Pacific Northwest”).

²⁰⁷ *Id.* (citing Mote, P. W. et al., 2015. Integrated Scenarios for the Future Northwest Environment. Version 2.0. USGS ScienceBase. Data set accessed 2015-03-02 at <https://www.sciencebase.gov/catalog/item/5006eb9de4b0abf7ce733f5c>).

²⁰⁸ *Id.* at ES-2.

²⁰⁹ Snover, A.K., et al., 2013. Climate Change Impacts and Adaptation in Washington State: Technical Summaries for Decision Makers. State of Knowledge Report prepared for the Washington State Department of Ecology. Climate Impacts Group, University of Washington, Seattle.

1 exceed average annual temperatures observed in the 20th century.²¹⁰ The Pacific Northwest and
 2 Washington State are also expected to experience more frequent and more intense summer heat
 3 events and less frequent and less intense winter cold spells. These increased temperatures are
 4 projected to contribute to:

- 5 • Decreasing winter snowpack and changes in the timing and volume of
 6 streamflows fed by snowmelt;
- 7 • Higher summer water demand, especially during more intense and longer summer
 8 droughts;
- 9 • An increased risk of flooding;
- 10 • An increased risk of fire in forest lands and open space;
- 11 • A higher risk for heat-related mortality during more intense summer heat waves;
- 12 • More summer air pollution and related health impacts;
- 13 • Declining summer hydropower production and higher summer energy demand,
 14 especially from air conditioning;
- 15 • Warmer water temperatures in streams, rivers, lakes, and Puget Sound; and
- 16 • Shifts in habitat, invasive species, and insects affecting forest health; agriculture;
 17 ecosystem function; and Tribal treaty rights and cultural identity.²¹¹

18 137. In addition to rising temperatures, changes in seasonal and extreme precipitation
 19 are expected and must be planned for. Most models project increasing winter precipitation and
 20 decreasing summer precipitation in the Puget Sound region.²¹² For example, relative to 1970-99,
 21 winter precipitation in the Puget Sound region is projected to be +9.9 to +11% higher, on
 22 average, for a low (RCP 4.5) and high (RCP 8.5) greenhouse gas scenario.²¹³ More of this
 23 precipitation will fall as rain rather than snow in the Cascade Mountains. Heavy rain events are
 24 also expected to become more frequent and intense.²¹⁴ These changes will affect the timing and

25 ²¹⁰ State of Knowledge, *supra* note 197, at 2-7.

26 ²¹¹ Climate Change in the Northwest, *supra* note 202.

27 ²¹² State of Knowledge, *supra* note 197, at 3-4; 5-1.

28 ²¹³ *Id.* at C-14.

²¹⁴ Warner, M.D., et al., *Changes in winter atmospheric rivers along the North American west coast in CMIP5 climate models*. 16 JOURNAL OF HYDROMETEOROLOGY 118-128 (2015).

1 volume of seasonal streamflow and flooding, particularly in mixed rain-and-snow watersheds
 2 like the Green, Snoqualmie, and Cedar River watersheds. Expected impacts include:

- 3 • Ongoing decreases in snowpack and glaciers, a key source of water for large
 4 urban areas and many other communities in the Puget Sound region;
- 5 • Higher winter streamflows, which increase the risk of winter flooding and
 6 streambank erosion;
- 7 • An increased risk of landslides;
- 8 • Increased challenges managing the potential for, and consequences of, increased
 9 river flooding, stormwater runoff, and urban flooding;
- 10 • Changes in water quality (e.g., temperature, sediment loads, pollutant loading)
 11 that can affect human health and aquatic species; and
- 12 • Lower and warmer summer streamflows.

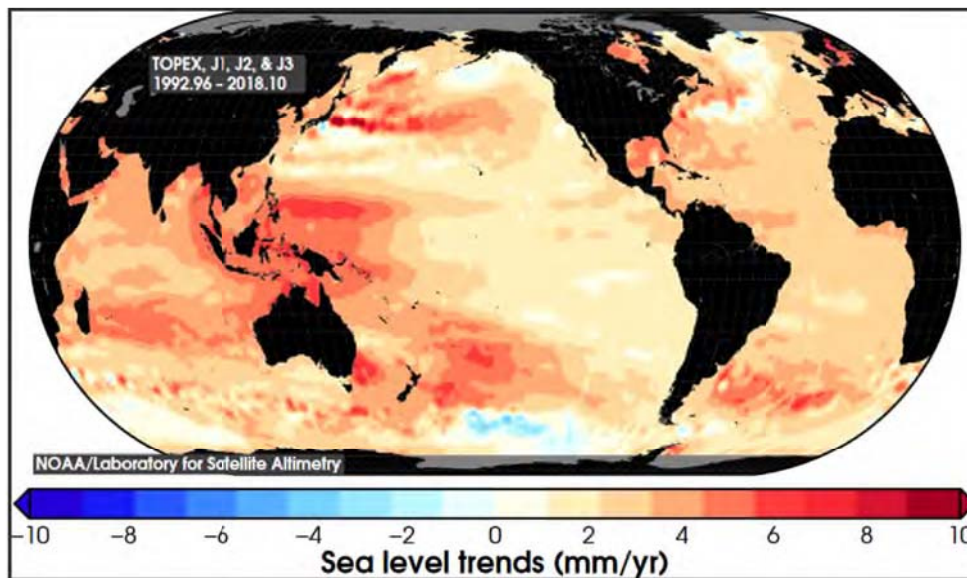
13 138. Efforts to address hydrologic impacts are increasing, particularly in the areas of
 14 flood risk reduction, stormwater management, water supply planning, hydropower production,
 15 and salmon recovery.

16 139. Sea level is rising and is expected to accelerate due to the global-scale effects of
 17 thermal expansion, ice melt from Greenland and Antarctica, and other factors sensitive to rising
 18 temperatures. The consequences for King County are potentially significant.

19 140. Global mean sea level (GMSL) has risen by 7 to 8 inches since 1900, with about 3
 20 of those inches occurring since 1993. Human-caused climate change has made a substantial
 21 contribution to GMSL rise since 1900, contributing to a rate of rise that is likely greater than
 22 during any preceding century in at least 2,800 years.²¹⁵ In addition to the tide gauge
 23 measurements, satellites also have taken measurements of sea level since late 1992. Because sea
 24 level is a long-term phenomenon, it takes approximately 25 years to establish a sea level rise
 25 trend from a dataset such as those in the satellite measurements. Thus, temporary phenomena
 26 such as El Niño and La Niña events can, over a shorter period of time, mask the true long-term

27 ²¹⁵ Sweet, W.V., et al., 2017: Sea level rise. In: Climate Science Special Report: Fourth
 28 National Climate Assessment, Volume I [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J.
 Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program,
 Washington, DC, USA, pp. 333-363, doi: 10.7930/J0VM49F2;
<https://science2017.globalchange.gov/chapter/12/>.

effect of climate change on sea level and be misleading, as the IPCC pointed out in its 2012 assessment report.²¹⁶ This is precisely what occurred in the eastern Pacific ocean due to a period of La Niña events during three of the four winters from 2008-2013, which biased the results of the relatively short span of satellite data that was available in 2013 when the IPCC published its most recent assessment report and made it appear that sea level was falling in this area. However, the complete satellite data from 1993 to present demonstrate that the eastern Pacific ocean is experiencing sea level rise as depicted below in the global map from the U.S. National Oceanic and Atmospheric Administration:



Global sea level rise map from satellite measurements from late 1992 to present.²¹⁷

141. Analysis of the full 25-year satellite record published in February, 2018 demonstrates that the rate of sea level rise is accelerating, primarily from the melting of the large ice sheets in Greenland and Antarctica, and therefore that previous projections of future sea level that had assumed a constant rate of sea level rise were too low. This acceleration means that future coastal impacts from sea level rise will be more severe than previously projected.²¹⁸

²¹⁶ Intergovernmental Panel on Climate Change, CLIMATE CHANGE: THE IPCC SCIENTIFIC ASSESSMENT, *supra* note 105, at 1148–49, available at https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter13_FINAL.pdf.

²¹⁷ https://www.star.nesdis.noaa.gov/sod/lsa/SeaLevelRise/slr/map_txj1j2_blue2red.pdf.

²¹⁸ R.S. Nerem, et al., *Climate-Change-Driven Accelerated Sea Level Rise Detected in the Altimeter Era*, 115 Proceedings of the National Academy of Sciences 2022 (Feb. 27, 2018),

142. In Seattle, sea level has risen about nine inches since 1899.²¹⁹ By 2100, sea level in Seattle is projected to rise by two feet on average (up to 56 inches).²²⁰ Ocean acidity is projected to increase by about 150 percent by 2100 under a high (A2) emissions scenario, relative to pre-industrial levels.²²¹ These changes in Puget Sound are projected to contribute to:

- Permanent inundation of low-lying areas;
- Increased coastal flooding during King Tides, daily high tides, and storm surges;
- Higher wave energy and increased exposure to waves;
- Increased shoreline erosion, bluff erosion, and coastal bluff landslides;
- Increased saltwater and/or groundwater intrusion (due to a higher groundwater table);
- Increased coastal “squeeze” in locations where nearshore habitat is not able to move inland as sea level rises; and
- Changes to the Puget Sound food web, including potential impacts to both wild and commercially-grown shellfish.²²²

143. Projected climate impacts in King County have widespread implications for people, infrastructure, and ecosystems in the Puget Sound region and have direct and indirect economic impacts on King County.

144. **Impacts on water supply and salmon.** Decreasing snowpack and changes in precipitation create additional uncertainty for regional and local water supplies (impacts vary by supplier) and will require a sustained effort to understand and prepare for the impacts of climate change.²²³ Hydrologic impacts will also affect availability of water for irrigation, hydropower

<http://www.pnas.org/content/115/9/2022>; see also <https://www.sciencedaily.com/releases/2018/02/180212150739.htm>

²¹⁹ https://tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?id=9447130

²²⁰ National Research Council, *Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (The National Academies Press 2012), <https://doi.org/10.17226/13389>.

²²¹ Feely, R.A., Doney, S.C. and Cooley, S.R., *Ocean acidification: Present conditions and future changes in a high-CO₂ world*. 22 OCEANOGRAPHY 36-47 (2009).

²²² 2015 SCAP, *supra* note 2, at 100.

²²³ Water Supply Forum, *Regional Water Supply Resiliency Project: Climate Change Resiliency Assessment Technical Memorandum* (2016), available at: <https://www.watersupplyforum.org/docs/102/cd8d53786c6d6fa0d0367520126295576b92515f/>

production, and habitat needs. Hydrologic changes will affect salmon across life stages, increasing the urgency and scale of habitat restoration and riparian shading needed to recover salmon that are relied upon by Treaty Tribes and commercial fishers. Additional investment will be needed to help address the growing challenges for summer water supply, particularly as it relates to the needs for salmon recovery and irrigation.

145. **Impacts on King County Assets and Infrastructure.** Climate change will require retrofitting and/or replacing many King County-owned assets and infrastructure to reduce the potential for damage associated with increased flooding, sea level rise, stormwater, and other impacts. Higher costs for maintenance, operations, and emergency repairs are also expected. Additional study will be needed in many cases to determine how to most effectively prepare County assets for climate change. For example:

- Drainage and stormwater infrastructure. Current pipes, culverts, ditches, and other drainage conveyances located within King County Roads right-of-ways and other locations will not sufficiently accommodate the greater quantities of water anticipated as a function of climate change. A likely result is more road failures, washouts, and road closures throughout the King County road network.
- Bridges. Many of King County's bridges are older and likely to experience more frequent closures due to higher flood water elevations exceeding the height of these bridges. Higher river flows also increase the potential for scour, erosion, and depositional processes around bridge abutments. Working together, these processes weaken the structural integrity of a bridge. As a result, it is anticipated that climate change will result in more frequent bridge closures, repairs and potentially replacements.
- Roads. Portions of King County's road network are vulnerable to landslides, slope failures, coastal flooding, and chronic riverine flooding as a function of heavy rain events and King Tides, creating delays for motorists, stranding properties cut off by flood waters or slides, and damaging road infrastructure. The current frequency and geographic extent of road closures due to flooding and slides will likely increase with the potential for more intense heavy rain events, river flooding, and sea level rise. More damage, more extensive or permanent road closures and detours, and an increased need for capital investments are likely.

WSFregionalwatersupplyresiliencyprojectclimatechangeApril2016FINAL.pdf; Seattle Office of Sustainability and Environment, *Carbon Neutral Climate Ready: Preparing for Climate Change* (2017), available at https://www.seattle.gov/Documents/Departments/Environment/ClimateChange/SEAClimatePreparedness_August2017.pdf.

- Waste Treatment and Conveyance. Sea level rise is expected to increase the potential for flooding and saltwater intrusion at several low-lying wastewater conveyance facilities. These issues can damage infrastructure and add to operations and maintenance costs.²²⁴ Additionally, given the increasing frequency of high flow storm events, there is greater urgency to make investments at the West Point Treatment Plant, located on the shoreline of Puget Sound, to add more redundancy for higher and longer lasting peak flows.

146. **Impacts on Public Health.** Climate change impacts on King County residents' health include the potential for: higher demands on emergency medical services with more heat-related illness and mortality;²²⁵ increased respiratory and cardiovascular disease due to projected increases in wildfire smoke, ground-level ozone, and allergens; an increased risk of illness associated with changes in freshwater and marine toxins and pathogens; an increased risk of illness associated with the anticipated spread of vector-borne diseases carried by mosquitoes, rodents, and ticks; and, increased mental health stress and risk of injury or death associated with more extreme climate or weather-related events.²²⁶ These impacts will exacerbate pre-existing inequities in health, housing, employment, and income and are expected to have disproportionate effects on children, older adults, outdoor workers, communities of color, low-income households, people who are socially or linguistically isolated, pregnant women, and people with chronic medical conditions. For example, increased mortality from extreme heat events has

²²⁴ King County Waste Treatment Division, *Vulnerability of Major Wastewater Facilities to Flooding From Sea-Level Rise* (2008), available at: https://your.kingcounty.gov/dnrp/library/archive-documents/wtd/csi/csi-docs/0807_SLR_VF_TM.pdf; King County Waste Treatment Division, *Saltwater Intrusion and Infiltration into the King County Wastewater System* (2011), available at https://your.kingcounty.gov/dnrp/library/wastewater/cso/docs/2011-03_SaltwaterIntrusionAndInfiltrationStudy.pdf; King County Waste Treatment Division, *Hydraulic Analysis of Effects of Sea-Level Rise on King County's Wastewater System* (2012), available at: https://your.kingcounty.gov/dnrp/library/wastewater/cso/docs/2012-11_HydraulicAnalysis_PhaseI_Task2_FINAL.pdf.

²²⁵ Calkins, M.M., et al., *Impacts of extreme heat on emergency medical service calls in King County, Washington, 2007-2012: relative risk and time series analyses of basic and advanced life support*, ENVIRONMENTAL HEALTH 15:13 (Jan. 28, 2016). doi: 10.1186/s12940-016-0109-0.

²²⁶ Isaksen, T., et al., *Increased hospital admissions associated with extreme-heat*, REVIEWS ON ENVIRONMENTAL HEALTH, 30(1):51-64 (2015). doi: 10.1515/reveh-2014-0050; Jackson, J.E., et al., *Public health impacts of climate change in Washington State: projected mortality risks due to heat events and air pollution*, 102 CLIMATIC CHANGE 159-186 (2010), doi: 10.1007/s10584-010-9852-3; Moore, S.K., et al. 2008. *Impacts of climate variability and future climate change on harmful algal blooms and human health*. 7 ENVIRONMENTAL HEALTH S4 (2008), doi:10.1186/1476-069X-7-S2-S4.

1 already been documented for very young persons, older adults, and those with existing health
 2 conditions like diabetes and respiratory disease.²²⁷ Additionally, lower cost and substandard
 3 quality housing is more likely to be co-located in proximity to significant industrial and
 4 transportation pollution sources and in areas more prone to flood hazard risks, exacerbating
 5 health impacts. Lower income populations are also less likely to have the resources needed to
 6 mitigate impacts through actions like flood proofing, home insulation, installing air conditioning,
 7 or easily accessing a shady park or air-conditioned public space.²²⁸

8 147. Climate change will require significant investments in Public Health services to
 9 meet these growing demands. Necessary actions will include expanding or developing
 10 surveillance systems for climate-related health impacts to provide timely information for Public
 11 Health action, such as health impacts associated with pollution, wildfire smoke, heat impacts and
 12 infectious disease (e.g., foodborne, waterborne, vector-borne); investing in emergency
 13 preparedness and response capabilities for event-based climate change health risks (e.g.,
 14 flooding, mud slides, wildfires, heat events); increasing support for community health clinics and
 15 medical support services provided by the County; and expanding outreach and partnership efforts
 16 to help King County residents and organizations understand, prepare for, and adapt to the risks of
 17 climate change on public health.

18 148. **Impacts on King County risk management.** Nationally, more frequent and
 19 severe storms and flood disasters are leading businesses and insurers to take steps to mitigate
 20 risks, triggering changes in insurance costs and availability.²²⁹ Many insurance carriers are now
 21 aggressively pushing for substantial rate increases, especially for clients with catastrophe (CAT)
 22 exposure. Property insurers are carefully reviewing their CAT accumulations in their portfolios
 23 and may cut capacity and/or substantially increase rates to help offset the impact of these

24
 25 ²²⁷ Isaksen, *supra* note 226; Isaksen, T., et al., *Increased mortality associated with extreme-*
 26 *heat exposure in King County, Washington, 1980-2010*, INTERNATIONAL JOURNAL OF
 BIOMETEOROLOG (2015), doi:10.1007/s00484-015-1007-9.

27 ²²⁸ 2015 SCAP, *supra* note 2, at 101.

28 ²²⁹ *Id.* at 101.

losses. It is estimated that King County will incur a 10% rate increase (or approximately \$450,000 in additional premium based off 2017 property values) during its 2018-19 policy term due to extreme weather-related disasters in the United States in 2017. King County is exploring alternative risk financing techniques, including parametric products, to minimize the long-term financial impact of the hardening insurance market on CAT driven perils, and the impact of global warming on the traditional insurance marketplace. These alternative risk financing techniques may increase costs to the County. Other strategies such as safeguarding properties through loss control measures or incorporating risk mitigation into site selection and new construction will also need to be pursued.

149. King County must adapt now to the ongoing impacts of climate change to abate ongoing damage to property, facilities, and equipment, with risks of increasing damage in the future. In particular, King County must improve, protect, move, and build infrastructure to adapt now to past and ongoing sea level rise.

150. King County is already experiencing, and working to abate, current harms caused by climate change. King County's commitment to confronting climate change is documented in the County's Strategic Climate Action Plan (first drafted in 2007, and updated in 2012 and 2015),²³⁰ which identifies actions needed to reduce greenhouse gas emissions and reduce climate risks to County operations, infrastructure, and residents. The 2015 Strategic Climate Action Plan update included an assessment of current projected climate impacts on critical public infrastructure and services owned or managed by King County and recommend near-term priority actions to address them.

151. Since 2008, King County has also described projected climate impacts and adopted formal policies directing programmatic actions and investments to reduce greenhouse gas emissions and prepare for climate impacts as part of the King County Comprehensive Plan. The Comprehensive Plan is the long-range guiding policy document for all land use and development regulations in unincorporated King County, and for regional services throughout

²³⁰ *Id.*

the County including transit, sewers, parks, trails and open space. The 2008 Comprehensive Plan²³¹ included recommendations for evaluation and consideration of the potential impacts of climate change, such as coastal flooding associated with sea level rise, more severe winter flooding, disaster preparedness updates, levee investment, and land use plans, as well as development regulations. Subsequent Comprehensive Plan updates in 2012²³² and 2016²³³ further detailed climate impacts and directed action and programmatic investment in climate preparedness.

152. As directed by the Strategic Climate Action Plan and King County Comprehensive Plan, the County has invested extensively in studies related to sea level rise, extreme precipitation, and flooding to better understand how climate change affects King County infrastructure and operations.²³⁴ For example, a 2008 study evaluating the effects of sea level rise on King County's Wastewater Treatment Division facilities recommended that sea level rise should be incorporated in planning for major asset rehabilitation or conveyance planning that involves the facilities included in the analysis. Since the release of the report, King County has modified the conveyance system and outfalls of the Wastewater Treatment Division facilities to reduce or eliminate seawater intrusions, even during high tide. Additional preparations for limiting saltwater intrusion include installing flap gates, raising weirs, and other similar controls. King County is also undertaking flood levee improvements and engaging in other flood-risk reduction activities, and has strengthened "freeboard" requirements for finished floor elevations

²³¹ King County Comprehensive Plan at 4-16 (Oct. 2008), available at https://www.kingcounty.gov/~media/depts/permitting-environmental-review/dper/documents/growth-management/comprehensive-plan-2008/Chap4_Environment_adopted08.ashx?la=en.

²³² <https://www.kingcounty.gov/depts/executive/performance-strategy-budget/regional-planning/king-county-comprehensive-plan/2012Adopted.aspx>

²³³ <https://www.kingcounty.gov/depts/executive/performance-strategy-budget/regional-planning/king-county-comprehensive-plan/2016Adopted.aspx>

²³⁴ See *supra* notes 178–180; Jim Simmonds, *Modeling Climate Change Impacts on Extreme Precipitation, Stormwater Design Requirements, and Wastewater Conveyance* (Oct. 19, 2017), available at <https://kingcountystormwater.org/2017/10/19/modeling-climate-change-impacts-on-extreme-precipitation-stormwater-design-requirements-and-wastewater-conveyance/>

1 beyond federal minimum requirements to provide an extra factor of safety in the face of climate
2 risks.

3 153. While actions are being taken to protect King County and its residents from the
4 impacts of climate change, the scope, scale, and cost of investment must increase over time to
5 address the magnitude of projected impacts and associated risks tied to rising greenhouse gas
6 emissions. Pervasive fossil fuel combustion and greenhouse gas emissions to date will cause
7 ongoing and future harms regardless of future fossil fuel combustion or future greenhouse gas
8 emissions. Future production and use of fossil fuels will accelerate the rate of temperature
9 change and sea level rise, requiring even greater expenditures to abate the injuries. King County
10 must plan for and adapt to future harms related to climate change now to ensure that abatement
11 of ongoing and future harms is done most efficiently and effectively and in order to protect
12 human well-being and public and private property before it is too late. Additionally, the
13 significant infrastructure needed to abate global warming requires long lead times for planning,
14 financing, and implementation.

15 154. Sea level rise, storm surges, and flooding caused by global warming threaten not
16 only the physical infrastructure and property of King County and its citizens, but also the safety,
17 lives, daily way of life, sense of community, and security of King County residents. The risk of
18 harm to King County and its citizens will increase, just as rising sea levels and other climate
19 change impacts will continue due to past and current greenhouse gas emissions.

20 155. Defendants relied upon their knowledge about climate change science to protect
21 their own business assets from expected rising seas and melting permafrost by incorporating
22 climate change science into their engineering standards for construction of their pipelines,
23 offshore oil platforms, and other projects, the same thing that the County now must do. Exxon
24 has stated that since its operations may be disrupted by “severe weather events” and “natural
25 disasters,” to protect business assets such as its offshore production facilities, coastal refining
26 operations, and petrochemical plants in vulnerable areas, its designs should account for the
27
28

“engineering uncertainties that climate change and other events may potentially introduce.”²³⁵ Chevron also takes into account potential risks to its operations and assets, including “storm severity and frequency” and “sea level rise” to “plan for their resiliency.”²³⁶ Likewise, ConocoPhillips has warned that it could incur increased expenses for its assets and operations if there are “significant changes in the Earth’s climate, such as more severe or frequent weather conditions.”²³⁷ Defendants thus recognize that protecting infrastructure and operations from climate change is necessary and entails additional planning and costs than would otherwise be required. In the same way, the County seeks to be able to more fully protect itself from climate change impacts to which Defendants have substantially contributed.

VIII. DEFENDANTS’ CONDUCT IS ONGOING, AND IS CAUSING CONTINUOUS AND RECURRING INJURIES TO THE COUNTY

156. Defendants’ conduct is causing a continuous encroachment upon and interference with the County’s property. For example, areas of the County that were once above the mean high tide line now experience regular tidal inundation. This sea level rise will inevitably grow worse, regularly inundating additional County-owned property, and eventually portions of coastal areas owned by the County may be continuously submerged.

157. Defendants’ conduct is also causing recurring harms to the County. These harms include encroachments upon and interferences with the County’s property from higher storm surges and more intense heavy rain events, as well as injuries to public health resulting from more frequent and more intense heat waves and flooding. These recurring harms will also grow worse and more frequent in the future.

²³⁵ Exxon Mobil Corporation, 2016 Form 10-K at 4 (Feb. 21, 2017), available at <https://www.sec.gov/Archives/edgar/data/34088/000003408817000017/xom10k2016.htm>.

²³⁶ Chevron Corporation, 2016 Form 10-K at 20 (Feb. 23, 2017), available at <https://www.sec.gov/Archives/edgar/data/93410/000009341017000013/cvx-123116x10kdoc.htm>.

²³⁷ ConocoPhillips, 2016 Form 10-K at 25 (Feb. 21, 2017), available at <https://www.sec.gov/Archives/edgar/data/1163165/000119312517050077/d264316d10k.htm>.

PUBLIC NUISANCE

159. The County repeats and incorporates by reference the preceding paragraphs as if fully set forth herein.

160. The County brings this claim seeking abatement pursuant to Washington public nuisance law, including RCW 7.48.010.

161. Defendants' production and promotion of massive quantities of fossil fuels, and their promotion of those fossil fuels' pervasive use, has caused, created, assisted in the creation of, contributed to, and/or maintained and continues to cause, create, assist in the creation of, contribute to and/or maintain global warming-induced sea level rise and other climate change hazards, a public nuisance in King County. Defendants, both individually and collectively, are substantial contributors to global warming and the County's attendant injuries and threatened injuries. The County's injuries and threatened injuries from each Defendant's contributions to global warming are indivisible injuries. Each Defendant's past and ongoing conduct is a direct and proximate cause of the County's injuries and threatened injuries. Defendants each should have known that this dangerous global warming with its attendant harms on coastal areas like King County would occur before it even did occur, and each Defendant in fact did have such knowledge. Each Defendant has at all relevant times been aware, and continues to be aware, that the inevitable emissions of greenhouse gases from the fossil fuels it produces combines with the greenhouse gas emissions from fossil fuels produced by the other Defendants, among others, to

1 result in dangerous levels of global warming with grave harms for coastal areas like King
 2 County. Defendants were aware of this dangerous global warming, and of its attendant harms on
 3 coastal areas like King County, even before those harms began to occur. Defendants' conduct
 4 constitutes a substantial and unreasonable interference with and obstruction of public rights and
 5 property, including, *inter alia*, the public rights to health, safety, and welfare of King County
 6 residents and other citizens whose safety and lives are at risk from increased storm surge
 7 flooding and whose public and private property is threatened with widespread damage from
 8 global warming-induced sea level rise, greater storm surges, and flooding. Defendants' conduct
 9 continues to cause, create, assist in the creation of, maintain, and/or contribute to these impacts.

10 162. Defendants, individually and collectively, are substantial contributors to global
 11 warming and to the injuries and threatened injuries suffered by the County. Defendants have
 12 caused or contributed to accelerated sea level rise from global warming, which has and will
 13 continue to injure public property and structures owned and managed by King County, through
 14 increased inundation, storm surges, and flooding, and which threatens the safety and lives of
 15 King County residents. Defendants have inflicted and continue to inflict injuries upon the
 16 County that require the County to incur extensive costs to protect public and private property
 17 against increased sea level rise, inundation, storm surges, flooding, and other climate change
 18 impacts.

19 163. Defendants have promoted the use of fossil fuels at unsafe levels even though
 20 they should have known and in fact have known for many years that global warming threatened
 21 severe and ever catastrophic harms to coastal areas like King County. Defendants promoted
 22 fossil fuels and fossil fuel products for unlimited use in massive quantities with knowledge of the
 23 hazard that such use would create.

24 164. Defendants are jointly and severally liable to the County for committing a public
 25 nuisance. The County seeks an order of abatement requiring Defendants to fund a climate
 26
 27
 28

1 change adaptation program for King County that addresses the risks of climate change to King
2 County.²³⁸

3 165. Defendants continue to produce, market, and sell massive quantities of fossil
4 fuels, and, as they know, the use of their fossil fuel products continues to emit greenhouse gases
5 and exacerbate global warming and the County's injuries. Defendants' actions are causing
6 recurring, intermittent, continuous, and/or ongoing harm to the County, including flooding and
7 erosion affecting County property.

8 166. Plaintiff's real property has been and will be damaged by Defendants' nuisance
9 and Plaintiff has spent and will spend substantial dollars to mitigate the damage caused by the
10 nuisance. Such damages and losses include but are not limited to:

- 11 • Costs to analyze and evaluate the future impacts of climate alteration, the
12 response to such impacts and the costs of mitigating, adapting to, or remediating
13 those impacts;
- 14 • Costs associated with increased drought conditions including alternate planting
15 and increase landscape maintenance or replacement costs;
- 16 • Costs associated with additional habitat protection and restoration actions to
17 protect salmon species listed as threatened or endangered under the Endangered
18 Species Act;
- 19 • Costs associated with repairing and replacing existing flood control, stormwater
20 controls, and drainage measures, and repairing flood damage;
- 21 • Costs associated with retrofitting or including additional risk factors in the design
22 of wastewater treatment and conveyance infrastructure;
- 23 • Costs of repair, maintenance, mitigation and rebuilding and replacement of road
24 systems, including road drainage, to respond to the impacts of climate change;
- 25 • Costs associated with alteration and repair of bridge structures to retain safety due
26 to increases in stream flow rates;
- 27 • Costs associated with sea level rise;
- 28 • Costs of repair of physical damage to buildings, facilities, and real property
owned by Plaintiff;

²³⁸ The County does not seek abatement with respect to any federal land.

- Costs of analysis of alternative infrastructure design and construction, and costs to implement such alternative design and construction;
- Costs associated with additional emergency planning, preparedness, response and recovery actions associated with increased risk of heat waves, wildfires, flooding.
- Costs associated with provision of additional public health services.
- Costs associated with increased cost to insure County assets;
- Costs associated with wildfire response, management, mitigation;
- Loss of income from property owned by Plaintiff due to reduced agricultural productivity or lease or rental income while property is unusable; and
- Loss of property tax revenue to the County from any property affected by sea level rise or other climate/extreme weather impacts.

167. The nuisance caused by Defendants is reasonably abatable, including through the use of coastal armament to protect against sea level rise and other resiliency measures to protect against global warming-induced injuries.

168. Building infrastructure to protect King County and its residents, will, upon information and belief, cost hundreds of millions of dollars.

COUNT TWO

(TRESPASS)

169. The County realleges and reaffirms each and every allegation set forth in all the preceding paragraphs as if fully stated here.

170. Plaintiff is the owner, in lawful possession, of real property and has sovereign responsibilities for King County.

171. Defendants have each intentionally engaged in conduct that has caused and contributed to climate change, thus causing flood waters, rain, and sea water to enter Plaintiff's property. The County has not granted permission to Defendants to engage in this conduct—*i.e.*, to intentionally produce, market, and sell massive quantities of fossil fuels, and promote their pervasive use, all with knowledge by Defendants that doing so would lead to climate change-related injuries (including sea level rise).

1 172. Defendants knew, with substantial certainty, that the use of their fossil fuel
2 products would both cause climate change and cause these invasions of Plaintiff's property,
3 without permission or right of entry.

4 173. These invasions are now occurring, and will continue to occur onto additional
5 County-owned property in the future. The County has not granted permission to Defendants to
6 engage in these invasions of the County's property, and the invasions were otherwise unjustified.

7 174. Plaintiff did not give Defendants permission for these invasions of property.

8 175. Defendants' trespasses are the direct and proximate cause of damages and losses
9 to the Plaintiff.

10 176. Defendants' conduct, individually and collectively, was a substantial factor in
11 causing global warming impacts, including accelerated sea level rise, increased storm surge
12 inundation, and increased intensity and frequency of precipitation, and was the actual and
13 proximate cause of the invasion of the County's property.

14 177. Defendants continue to produce, market, and sell massive quantities of fossil
15 fuels, and, as they know, the use of their fossil fuel products continues to emit greenhouse gases
16 and exacerbate global warming and the County's injuries. The County has not granted
17 permission to Defendants to engage in this conduct—*i.e.*, to intentionally produce, market, and
18 sell massive quantities of fossil fuels, and promote their pervasive use, all with knowledge by
19 Defendants that doing so would lead to climate change-related injuries (including sea level rise).
20 Defendants' actions are causing recurring, intermittent, continuous, and/or ongoing harm to the
21 County, including flooding and erosion affecting County property.

22 178. Defendants' conduct constitutes a continuing, unauthorized intrusion and a
23 continuing trespass onto the County's property. Defendants' continued trespass has caused, and
24 will continue to cause, substantial damage to the County. The County has not granted
25 permission to Defendants to engage in these intrusions and trespasses on the County's property,
26 which are otherwise unjustified.

1 179. Plaintiff's real property has been and will be damaged by Defendants' trespasses
 2 and Plaintiff has spent and will spend substantial dollars to mitigate the damage caused by the
 3 trespasses. Such damages and losses include but are not limited to:

- 4 • Costs to analyze and evaluate the future impacts of climate alteration, the
 5 response to such impacts and the costs of mitigating, adapting to, or remediating
 those impacts;
- 6 • Costs associated with increased drought conditions including alternate planting
 7 and increase landscape maintenance or replacement costs;
- 8 • Costs associated with repairing and replacing existing flood control, stormwater
 9 control and drainage measures, and repairing flood damage;
- 10 • Costs of repair, maintenance, mitigation and rebuilding and replacement of road
 11 systems, including road drainage, to respond to the impacts of climate change;
- 12 • Costs associated with alteration and repair of bridge structures to retain safety due
 to increases in stream flow rates;
- 13 • Costs associated with sea level rise;
- 14 • Costs associated with retrofitting or including additional risk factors in the design
 15 of wastewater treatment and conveyance infrastructure;
- 16 • Costs of repair of physical damage to buildings, facilities, and real property
 17 owned by Plaintiff;
- 18 • Costs of analysis of alternative infrastructure design and construction and costs to
 19 implement such alternative design and construction;
- 20 • Costs associated with additional emergency planning, preparedness, response and
 21 recovery actions associated with increased risk of heat waves, wildfires, flooding;
- 22 • Costs associated with provision of additional public health services;
- 23 • Costs associated with increased cost to insure County assets;
- 24 • Costs associated with wildfire response, management, mitigation;
- 25 • Loss of income from property owned by Plaintiff due to reduced agricultural or
 26 forest productivity or lease or rental income while property is unusable; and
- 27 • Loss of property tax revenue to the County from any property affected by sea
 28 level rise or other climate/extreme weather impacts

180. The nuisance caused by Defendants is reasonably abatable, including through the use of coastal armament to protect against sea level rise, and other resiliency measures to protect against global warming-induced injuries.

181. These damages and losses are the direct and proximate result of climate alteration by Defendants in excess of historical trends in climate variation.

RELIEF REQUESTED

WHEREFORE, Plaintiff prays for judgment and an order against each Defendant, jointly and severally, as follows:

A. Finding Defendants BP, Chevron, ConocoPhillips, Exxon, and Shell jointly and severally liable for causing, creating, assisting in the creation of, contributing to, and/or maintaining a public nuisance;

B. Ordering an abatement fund remedy to be paid for by Defendants to provide for infrastructure, costs of studying and planning, and other costs in King County necessary for King County to adapt to global warming impacts;

C. Compensatory damages in an amount according to proof, of the costs of actions King County has already taken, is currently taking, and needs to take to protect King County infrastructure and property, and to protect the public health, safety, and property of its residents from the impacts of climate change;

D. Awarding attorneys' fees as permitted by law;

E. Awarding costs and expenses as permitted by law;

F. Awarding pre- and post-judgment interest as permitted by law; and

G. Awarding such other relief as this Court deems just and proper.

Dated: May 9, 2018

Respectfully submitted,

KING COUNTY

/s/ Jennifer Stacy

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